

THE TECHNOLOGY REVIEW

RELATING TO THE MASSA-
CHUSETTS INSTITUTE
OF TECHNOLOGY



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ALUMNI ASSOCIATION

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THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY Boston, Mass.

THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY aims to give thorough instruction in *Civil, Mechanical, Chemical, Mining, Electrical, and Sanitary Engineering; in Chemistry, Electrochemistry, Architecture, Physics, Biology and Public Health, Geology, and Naval Architecture.*

To be admitted to the Institute, the applicant must have attained the age of seventeen years and must pass examinations in algebra, plane and solid geometry, physics, history of the United States (or ancient history), English, French and German. Preparation in some one of a series of elective subjects is also required. A division of these examinations between different examination periods is allowed. In general, a faithful student who has passed creditably through a good high school, having two years' study of French and German, should be able to pass the Institute examinations.

Graduates of colleges, and in general all applicants presenting certificates representing work done at other colleges, are excused from the usual entrance examinations and from any subjects already satisfactorily completed. Records of the College Entrance Examination Board, which holds examinations at many points throughout the country and in Europe, are also accepted for admission to the Institute.

Instruction is given by means of lectures and recitations, in connection with appropriate work in the laboratory, drawing-room or field. To this end extensive laboratories of chemistry, physics, biology, mining, mechanical engineering, applied mechanics, and the mechanic arts, have been thoroughly equipped, and unusual opportunities for field-work and for the examination of existing structures and industries have been secured. So far as is practicable, instruction is given personally to small sections rather than by lectures to large bodies of students.

The regular courses are of four years' duration, and lead to the degree of Bachelor of Science. In most courses the work may also be distributed over five years by students who prefer to do so. Special students are admitted to work for which they are qualified; and the degrees of Master of Science, Doctor of Philosophy, and Doctor of Engineering are given for resident study subsequent to graduation. Opportunity for research is offered in all the departmental laboratories, in the three recently established Research Laboratories of Applied Chemistry and Physical Chemistry, and in the Sanitary Research Laboratory and Sewage Experiment Station.

The tuition fee, not including breakage in the laboratories, is \$250 a year. In addition, \$30 to \$35 per year is required for books and drawing materials.

For catalogues and information, address

ALLYNE L. MERRILL, *Secretary of the Faculty,*

491 Boylston Street, Boston.

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JAMES F. McELWAIN, '97 (term expires January, 1916).

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Term expires January, 1915.

Term expires January, 1916.

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Term expires March, 1916.

Term expires March, 1917.

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Term expires March, 1919.

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By vote of the Alumni Council, February 16, 1914, the president and secretary-treasurer are members *ex-officio* of all committees, without vote.

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LAWRENCE ALLEN, '07.
ORVILLE B. DENISON, '11.

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MILES S. RICHMOND, '99, until the annual meeting of 1916.
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Term expires January, 1915.	Term expires January, 1916.	Term expires January, 1917.
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The Technology Review

WALTER BRADLEE SNOW, '82, <i>Chairman.</i>	FREDERIC H. FAY, '93.
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"The Tech"

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COUNCIL OF THE ALUMNI ASSOCIATION

COUNCIL MEETINGS: 4th Monday of each month from October to May, inclusive.
The Council meets at the Engineers Club, Boston.

Officers of the Association:—

President, JASPER WHITING, '89.

Vice-Presidents, WILLIAM H. KING, '94, HENRY J. HORN, '88, MORRIS KNOWLES, '91.

Secretary-Treasurer, WALTER HUMPHREYS, '97.

Field Manager, I. W. LITCHFIELD, '85.

Executive Committee, { MERTON L. EMERSON, '04. JOSEPH H. KNIGHT, '96.
HERBERT N. DAWES, '93. JAMES F. McELWAIN, '97.

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A. A. NOYES, '86.

A. F. BEMIS, '93.

J. W. ROLLINS, '78.

FREDERIC H. FAY, '93.

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ARTHUR C. ANTHONY, '86.

FRANKLIN B. RICHARDS, '84.

LOUIS K. ROURKE, '95.

CHARLES W. EATON, '85.

LUTHER K. YODER, '95.

FRANK A. MERRILL, '87.

W. LYMAN UNDERWOOD, '98.

GEORGE C. WHIPPLE, '89.

THOMAS E. SEARS, '03.

SUMNER B. ELY, '92.

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TECHNOLOGY CLUB OF BRIDGEPORT. ATLANTA ASSOCIATION M. I. T.
TECHNOLOGY CLUB OF CENTRAL PENNSYLVANIA.
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TECHNOLOGY CLUB OF MONTANA.
TECH CLUB OF THE UNIVERSITY OF ILLINOIS.
TECHNOLOGY ASSOCIATION OF WORCESTER COUNTY

THE TECHNOLOGY CLUBS ASSOCIATED

ORGANIZED IN NEW YORK, JANUARY 17, 1913

President, MORRIS KNOWLES, '91.

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136 Federal Street, Boston, Mass.		147 Milk Street, Boston, Mass.	
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84 State Street, Boston, Mass.		50 Oliver Street, Boston, Mass.	
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Massachusetts Institute of Technology, Boston.		Ass't Secretary, 1095 Fellsway, Malden, Mass.	
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308 Boylston St., Boston, Mass.		Ass't Secretary, 10 Regent Street, W. New- ton, Mass.	
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561 Tremont Street, Boston, Mass.		University Club, Hartford, Conn.	
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44 Kilby Street, Boston, Mass.		99 Aspen Avenue, Auburndale, Mass.	
		ELMER E. DAWSON, JR., Ass't Sec.	'14
		1900 Nebraska Avenue, St. Louis, Mo.	

LOCAL ALUMNI ASSOCIATIONS

Albany—TECHNOLOGY CLUB OF ALBANY, Russell Suter ('00), Sec., Con. Com., Albany.

Atlanta—ATLANTA ASSOCIATION M. I. T., H. M. Keys ('99), Secretary, 65 West 10th Street, Atlanta, Ga.

Birmingham—SOUTHEASTERN TECHNOLOGY ASSOCIATION, A. F. Mohan ('08), care Kirkpatrick Sand & Cement Co., Birmingham, Ala.

▲▲ Luncheon—Saturdays at 1.00 p. m. at the Turnverein.

Boston—TECHNOLOGY CLUB OF BOSTON, Dr. Robert Seaton Williams ('02), Secretary, 83 Newbury Street, Boston, Mass.

Bridgeport—TECHNOLOGY CLUB OF BRIDGEPORT, Wilbur A. Swain ('15), Secretary, Criterion Club, Bridgeport, Conn.

Buffalo—TECHNOLOGY CLUB OF BUFFALO, H. M. Cowper ('05), Secretary, 1010 Mutual Life Bldg., Buffalo, N. Y.

▲▲ Luncheon—First Thursday of month, 12.30 p. m., at Buffalo Chamber of Commerce.

Butte—TECHNOLOGY CLUB OF MONTANA, C. D. Demond ('93), Secretary-Treasurer, Main Street, Anaconda, Mont.

Chicago—NORTHWESTERN ASSOCIATION M. I. T., George B. Jones ('05), Secretary, 1444 Monadnock Bldg., Chicago, Ill.

▲▲ Luncheon—Thursdays at 12.30 p. m. at Grand Pacific Hotel, Clark and Jackson Streets.

Cincinnati—THE CINCINNATI M. I. T. CLUB, Stuart R. Miller ('07), Secretary, 3366 Morrison Avenue, Clifton, Cincinnati, Ohio.

▲▲ Luncheon—Tuesdays from 12.30 to 2.00 p. m. in Main Dining Room, at the Bismarck, Mercantile Library Building, Walnut Street.

Cleveland—TECHNOLOGY CLUB OF NORTHERN OHIO, Donald R. Stevens ('11), Secretary, Peerless Motor Car Company, Cleveland, Ohio.

Dayton—DAYTON TECHNOLOGY ASSOCIATION, Edward C. Wells ('92), Secretary, Platt Iron Works, Dayton, Ohio.

▲▲ Luncheon—Fridays at 12.15 at the Rike-Kumler restaurant.

Denver—ROCKY MOUNTAIN TECHNOLOGY CLUB, M. W. Hayward ('06), Secretary, 263 So. Clarkson Street, Denver, Col.

▲▲ Luncheon—Wednesdays from 12.30 to 1.30 p. m. at Colorado Electric Club, Chamber of Commerce Bldg., Denver, Col.

Detroit—DETROIT TECHNOLOGY ASSOCIATION, Preston M. Smith ('05), Secretary, 54 Macomb Street, Detroit, Mich.

Duluth—TECHNOLOGY CLUB OF LAKE SUPERIOR, Duluth, Minn., Floid M. Fuller ('06), Secretary, 812-814 Torrey Bldg., Duluth.

Hartford—TECHNOLOGY CLUB OF HARTFORD, G. W. Baker ('92), Sec., Box 983, Hartford, Conn.

Hawaii—TECHNOLOGY CLUB OF HAWAII, Norman Watkins ('98), Sec., Box 767, Honolulu, T. H.

Indianapolis—INDIANA ASSOCIATION M. I. T., Wilson B. Parker ('88), Secretary, 805 Board of Trade Bldg., Indianapolis, Ind.

▲▲ Luncheon—15th day of each month at the University Club.

Japan—TECHNOLOGY ASSOCIATION OF JAPAN, Dr. Takuma Dan ('78), Secretary-Treasurer, 344 Awayama Harajiku, Tokio, Japan.

Kansas City, Mo.—SOUTHWESTERN ASSOCIATION M. I. T., Robert S. Beard ('05), Secretary-Treasurer, 1122 Ohio Street, Lawrence, Kans.

Lawrence } TECHNOLOGY CLUB OF THE MERRIMACK VALLEY, John Arthur Collins, Jr. ('97),
Lowell } Secretary, 67 Thorndyke Street, Lawrence, Mass.

Los Angeles—TECHNOLOGY CLUB OF SOUTHERN CALIFORNIA, Robert S. Breyer ('10), Secretary, Box 614, Y. M. C. A., Los Angeles, Cal.

▲▲ Luncheon—First Wednesday of each month at the University Club.

Manchester—TECHNOLOGY CLUB OF NEW HAMPSHIRE, Walter D. Davol ('06), Secretary-Treasurer, 819 Elm Street, Manchester, N. H.

Manila—TECHNOLOGY CLUB OF THE FAR EAST, William A. Adams ('08), Secretary, 39 Nan-king Road, Shanghai, China.

Milwaukee—TECHNOLOGY CLUB OF MILWAUKEE, Mitchell Mackie ('05), Secretary, Commercial Auto Co., Milwaukee, Wis.

▲▲ Luncheon—Every Thursday noon at the University Club.

Minneapolis—TECHNOLOGY ASSOCIATION OF MINNESOTA, DeW. C. Ruff ('07), Secretary, Manhattan Bldg., St. Paul, Minn.

Montreal—TECHNOLOGY CLUB OF LOWER CANADA, E. B. Evans ('06), 357 St. Catherine Street, W., Montreal, Quebec.

New Bedford—TECHNOLOGY CLUB OF NEW BEDFORD, Richard D. Chase ('92), Secretary, 607 Purchase Street, New Bedford, Mass.

New Orleans—TECHNOLOGY CLUB OF THE SOUTH, Frank Wyman Crosby ('90), Secretary, 501-504 Denegre Building, New Orleans, La.

New York—TECHNOLOGY CLUB OF NEW YORK, 17 Gramercy Park, F. C. Schmitz ('95), Secretary, 220 Fifth Avenue, New York, N. Y.

Philadelphia—TECHNOLOGY CLUB OF PHILADELPHIA, F. B. Wood ('09), 5001 Lancaster Avenue, Philadelphia, Pa.

Pittsburgh—PITTSBURGH ASSOCIATION M. I. T., Harry A. Rapelye ('08), Secretary, 2123 Oliver Bldg., Pittsburgh, Pa.

Pittsfield—TECHNOLOGY CLUB OF PITTSFIELD, E. A. Jones ('87), P. O. Box 1623, Pittsfield, Mass.

Portland—TECHNOLOGY ASSOCIATION OF OREGON, R. E. Cushman ('06), Secretary-Treasurer, 266 East 27th Street, N., Portland, Ore.

Providence—TECHNOLOGY CLUB OF RHODE ISLAND, Clarence L. Hussey ('08), Secretary, Fruit Hill, 1547 Smith Street, Providence, R. I.

Rochester—TECHNOLOGY CLUB OF ROCHESTER, J. F. Ancona ('03), Secretary, 190 Birr Street, Rochester, N. Y.

St. Louis—ST. LOUIS SOCIETY OF THE M. I. T., Amasa M. Holcombe, ('04), Secretary-Treasurer, care of Carr & Carr, 510 Pine Street, St. Louis, Mo.

San Francisco—TECHNOLOGY ASSOCIATION OF NORTHERN CALIFORNIA, Office, 832 Merchants Exchange Bldg., San Francisco, Cal., Herbert D. McKibben ('06) Secretary, 2136 Center Street, Berkeley, Cal.

~~40~~ Luncheon—Tuesdays at Jules Café.

Salt Lake City—INTERMOUNTAIN TECHNOLOGY ASSOCIATION, Owen H. Gray, ('97), Secretary-Treasurer, 405 Dooly Block, Salt Lake City, Utah.

Seattle—TECHNOLOGY CLUB OF PUGET SOUND, Joseph Daniels ('05), Secretary, Box 115, University Station, Seattle, Wash.

~~40~~ Luncheon—Once a month, usually third Friday.

Spokane—INLAND EMPIRE ASSOCIATION OF THE M. I. T., Philip F. Kennedy ('07), Secretary, 1129 Hamilton Street, Spokane, Wash.

Springfield—TECHNOLOGY ASSOCIATION OF THE CONNECTICUT VALLEY, Ernest W. Pelton ('03), Secretary, 77 Forest Street, New Britain, Conn.

Steelton—TECHNOLOGY CLUB OF CENTRAL PENNSYLVANIA, E. L. Chapman, ('01), Secretary, Box 764, Harrisburg, Pa.

Syracuse—M. I. T. CLUB OF CENTRAL NEW YORK, H. N. Burhans ('07), Secretary, 227 Mc-Lennan Avenue, Syracuse, N. Y.

Urbana—TECH CLUB OF THE UNIVERSITY OF ILLINOIS, H. E. Babbitt ('11), Secretary, 806 W. California Street, Urbana, Ill.

Washington—WASHINGTON SOCIETY OF THE M. I. T., Parker V. Dodge ('07), 724 9th Street N. W., Washington, D. C.

Worcester—TECHNOLOGY ASSOCIATION OF WORCESTER COUNTY, Louis E. Vaughan ('02), Secretary-Treasurer, 4 Fenimore Road, Worcester, Mass.

FIXED LUNCHEONS

Birmingham—Southwestern Technology Association, Turnverein, Saturdays at 1.00 p. m.

Buffalo—Technology Club of Buffalo, at the Buffalo Chamber of Commerce, on the first Thursday of every month at 12.30 p. m.

Chicago—Northwestern Association of M. I. T. at Grand Pacific, Thursdays at 12.30 p. m.

Cincinnati—Cincinnati M. I. T. Club in the Main Dining Room, at the Bismarck, Mercantile Library Bldg., Walnut Street, Tuesdays from 12.30 to 2.00 p. m.

Dayton—Dayton Technology Club, Fridays, at 12.15, at the Rike-Kumler restaurant.

Denver—Rocky Mountain Technology Club, Wednesdays, from 12.30-1.30 p. m. at Colorado Electric Club, Chamber of Commerce Bldg., Denver, Col.

Indianapolis—15th day of each month at the University Club.

Los Angeles—Technology Club of Southern California, at the University Club, on the first Wednesday of each month.

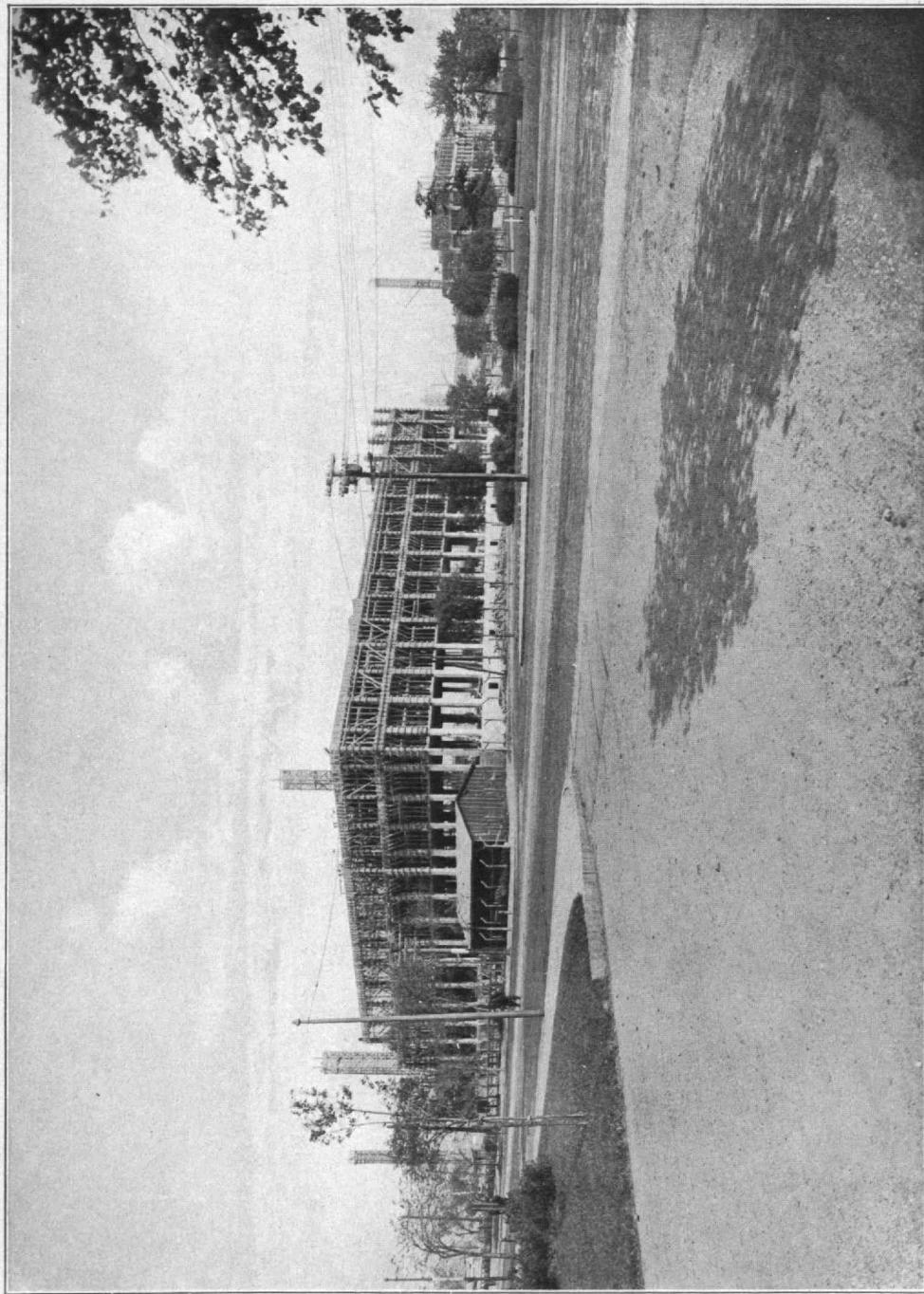
Milwaukee—Technology Club of Milwaukee every Thursday noon at the University Club.

San Francisco—Technology Association of Northern California, at Jules Café, Tuesdays.

Seattle—Technology Club of Puget Sound, monthly, usually the third Friday.

SUSTAINING MEMBERS OF THE ALUMNI ASSOCIATION

Edward D. Adams, '69
Frederick H. Adams, '11
Louis W. Adams, '03
Orton W. Albee, '93
W. B. Allbright, '78
Arthur C. Anthony, '86
C. B. Appleton, '84
Charles M. Baker, '78
J. C. T. Baldwin, '88
William L. Benedict, '80
Edgar M. Berliner, '07
W. I. Bickford, '01
Zenas W. Bliss, '89
H. L. Bodwell, '98
Philip D. Borden, '73
James C. Boyd, '93
H. G. Bradlee, '91
F. H. Briggs, '81
H. F. Bryant, '87
Leonard T. Bushnell, '05
G. H. Capen, '83
George E. Clafin, '88
Eugene H. Clapp, '95
Whitney Conant, '68
F. L. Connable, '93
Joseph W. Crowell, '04
Edward Cunningham, '91
William L. Curry, '99
William C. Cushing, '87
H. H. Cutler, '81
Herbert Dabney, '75
J. R. Daniell, '97
William C. Dart, '91
Alvan L. Davis, '98
E. H. Dewson, '85
Franklin W. Doliber, '97
George A. Draper, '76
Irénée duPont, '97
P. S. duPont, '90
N. Durfee, '89
Charles W. Eaton, '85
Edward L. Eedes, '09
Merton L. Emerson, '04
A. H. Eustis, '03
F. H. Fay, '93
S. M. Felton, '73
Arthur B. Foote, '99
T. A. Foque, '88
E. Frank, '06
Edward V. French, '89
L. D. Gardner, '98
Charles W. Goodale, '75
George F. Goodnow, '88
George E. Hale, '90
G. W. Hamilton, '80
George E. Harkness, '96
F. R. Hart, '89
Charles Hayden, '90
Schuyler Hazard, '90
J. B. Henck, '76
Franklin W. Hobbes, '89
Frank W. Hodgdon, '76
E. Holbrook, '74
F. C. Holmes, '92
Charles F. Hopewell, '94
Arthur T. Hopkins, '97
H. J. Horn, '88
Henry Howard, '89
C. W. Hubbard, '09
S. K. Humphrey, '98
H. Jaques, '77
Carl F. Johnson, '01
Daniel S. Johnson, '00
Paul Johnson, '98
Arthur W. Jones, '88
E. A. Jones, '87
Theodore Jones, '86
Chas. W. Kellogg, Jr., '02
H. S. Kimball, '91
W. H. King, '94
William J. Knapp, '06
Van Rensselaer Lansingh, '98
W. H. Lawrence, '91
E. H. Laws, '96
F. M. Learned, '76
C. M. Leonard, '00
Theo. J. Lewis, '76
Philip Little, '79
R. W. Lodge, '79
Fred W. Lord, '93
Frank W. Lovejoy, '94
W. E. McCaw, '92
A. D. MacLachlan, '96
Charles T. Main, '76
H. C. Marcus, '01
Austin B. Mason, '10
S. D. Mason, '70
George H. May, '92
W. H. Merrill, '90
H. M. Montgomery, '79
H. C. Morris, '01
Everett Morss, '85
Henry A. Morss, '93
P. A. Mosman, '87
William J. Mullins, '85
William B. Page, '93
F. A. Park, '95
J. Scott Parrish, '92
E. E. Pettee, '92
F. M. Pinto, '91
Raymond B. Price, '94
D. W. Richards, '94
R. H. Richards, '68
T. G. Richards, '94
Richard A. Robertson, '78
T. W. Robinson, '84
J. A. Rockwell, '96
E. W. Rollins, '71
J. W. Rollins, '78
Montgomery Rollins, '89
H. F. Ross, '82
Guy H. Ruggles, '06
John C. Runkle, '88
Norman F. Rutherford, '96
Richard E. Schmidt, '87
George O. Schneller, '00
T. E. Sears, '03
Lewis J. Seidensticker, '98
A. Forrest Shattuck, '91
F. N. Smalley, '96
J. C. Smith, '88
Frank A. Smythe, '89
Frank G. Stantial '79
G. F. Starbuck, '97
William C. Stearns, '71
Eben S. Stevens, '68
Charles A. Stone, '88
Bradley Stoughton, '96
S. Sturges, '87
Henry N. Sweet, '81
Gerard Swope, '95
H. P. Talbot, '85
Albert W. Thompson, '96
J. P. Tolman, '68
J. H. Towne, '90
Walter D. Townsend, '76
L. B. Turner, '05
W. Lyman Underwood, '98
Henry M. Waite, '90
Albert C. Warren, '74
Leonard C. Wason, '91
K. W. Waterson, '98
W. H. Watkins, '95
Edwin S. Webster, '88
Robert S. Weston, '94
George C. Whipple, '89
Willis R. Whitney, '90
F. H. Williams, '73
Sidney Williams, '87
Arthur L. Williston, '89
Kenneth F. Wood, '94
F. E. Woodbury, '89
Henry E. Worcester, '97
A. G. Zimmerman, '94



THE NEW TECHNOLOGY
From Massachusetts Avenue and Charles River Esplanade looking Northeast. Buildings 1 and 3 in foreground and Buildings 2 and 4 beyond at the right.

The Technology Review

VOL. XVI NOVEMBER, 1914

No. 8

PROGRESS ON THE NEW BUILDINGS

Roofs of the two wings to be on November 15, and on the central Library building February 1—Brick work going up and stone work soon to begin

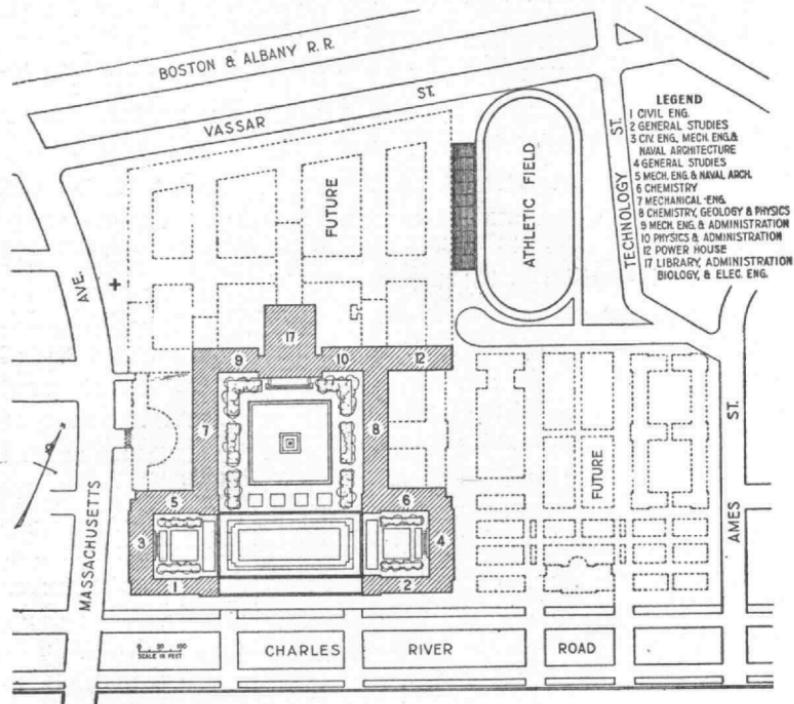
A number of circumstances occurred during the late spring and early summer which combined to make it prudent for the Institute to modify its original building plans in some degree. The most important item in the list was the decision of the court with reference to the disposal of the Boylston street property, which means that the Rogers and Walker buildings will have to be used for educational work for some time to come. It was further found to be inadvisable to sell the Clarendon street property, because of the condition of the real estate market, and the general financial aspect clinched the decision to somewhat restrict building operations.

No fundamental change in the general scheme has been made, as a glance at the plan on page 540 will show. The casual observer would not be aware that any changes had been made, as the group of buildings to be constructed will be complete in itself. The wings back of the line of the library, which were to have been used by the departments of mining and metallurgy, physics, electrical engineering and some of the laboratory work of mechanical engineering, will be omitted for the present. The departments of architecture and mining and metallurgy will remain in the Rogers and Walker buildings until provisions are made for them across the river. The plan of the buildings on page 540 shows the relocation of the departments. When the rear wings shall have been added at a later date the original plan can easily be carried out with a minimum amount of interior change.

Another feature of apparent delay was the engineering problem connected with the foundation work; for although the exhaustive report of Professor Crosby and the borings made by the engineers showed beyond a doubt that the underground conditions were

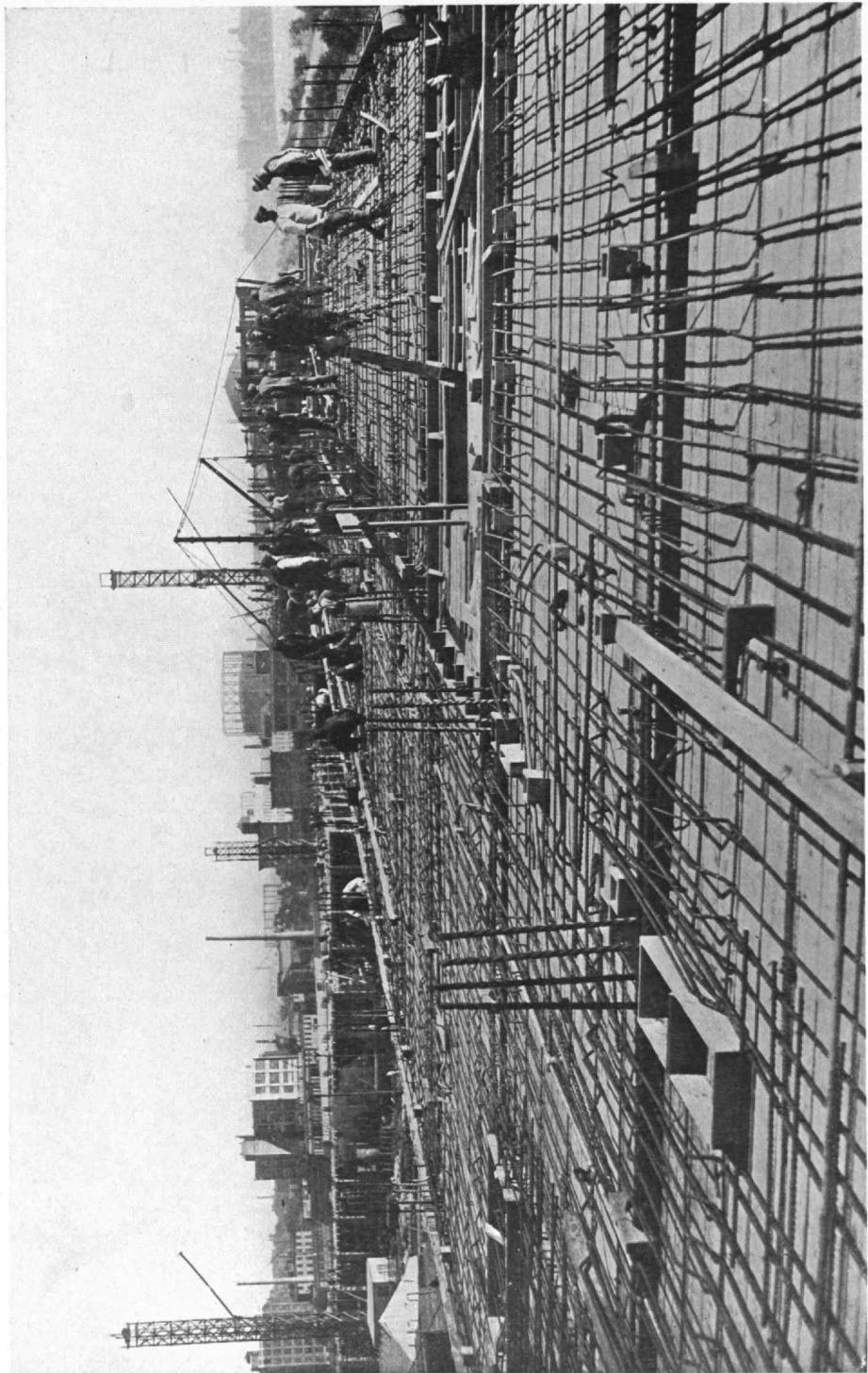
much more favorable than might have been expected in that locality, it was necessary to take every precaution to insure the permanence of the great masses of cement and brick and stone that are to be sustained on these foundations.

It was not until well along into August that the construction began to appear above the ground; but in the meantime prepara-

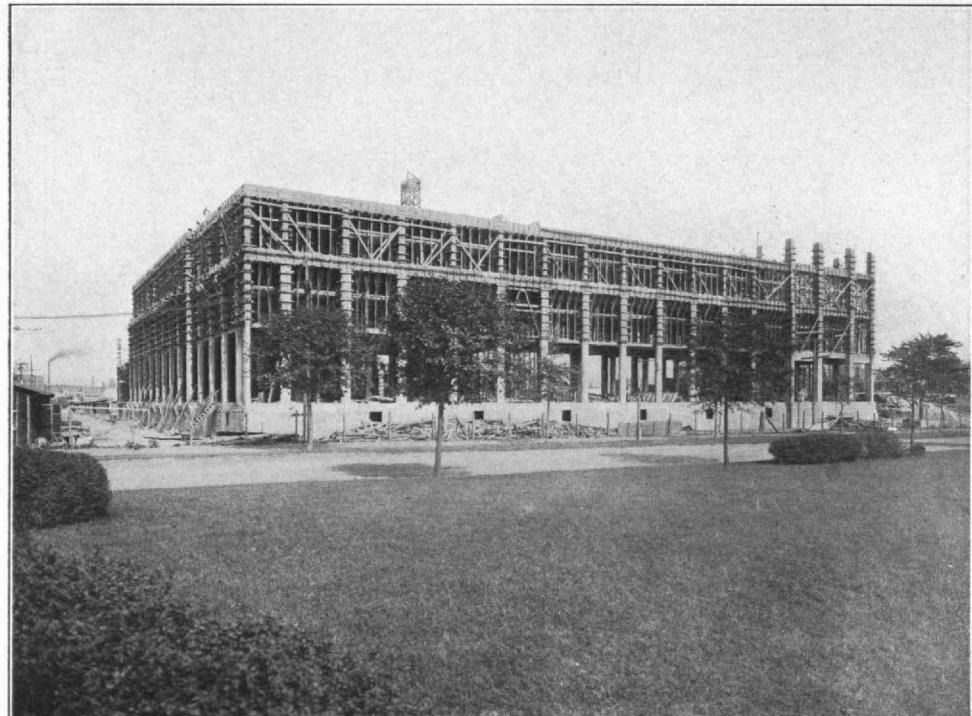


TECHNOLOGY SITE SHOWING EDUCATIONAL GROUP NOW BEING BUILT AND NEW ATHLETIC FIELD

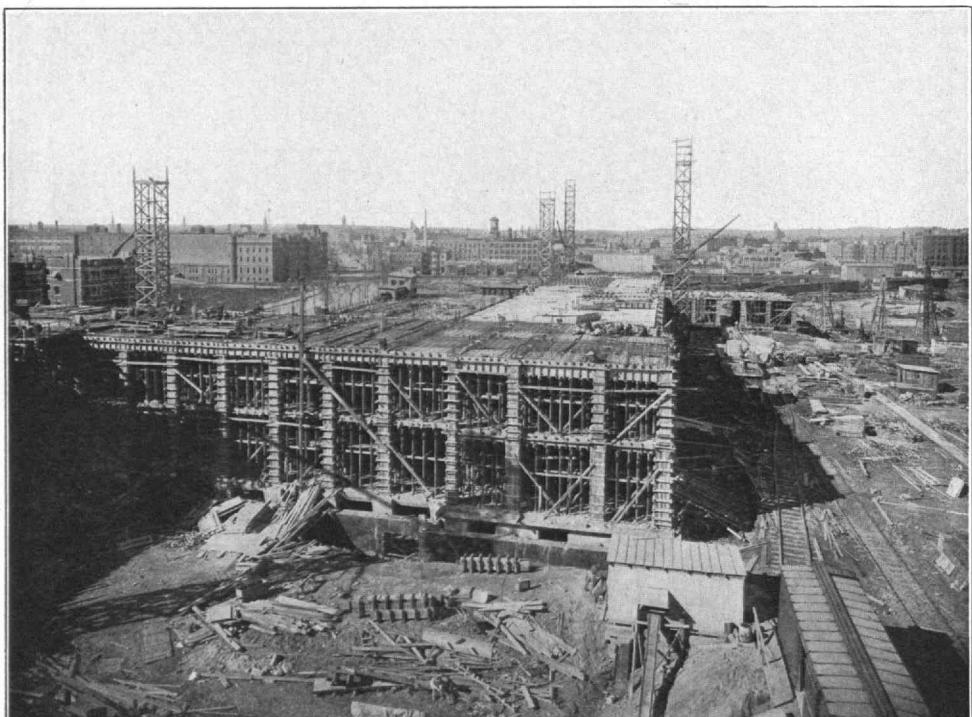
tions for expeditious building operations had been thoroughly made so that the ten thousand carloads of material required for the building of the great edifice could be handled most effectively. These preparations included seven thousand feet of railroad track for distributing materials at the places where they are to be used, a special locomotive and a locomotive crane, together with an arrangement of conveyers and mixers, by means of which the making of the cement was practically a continuous process, the chutes of the construction towers delivering without cessation a liquid lake of cement covering an acre at an operation.



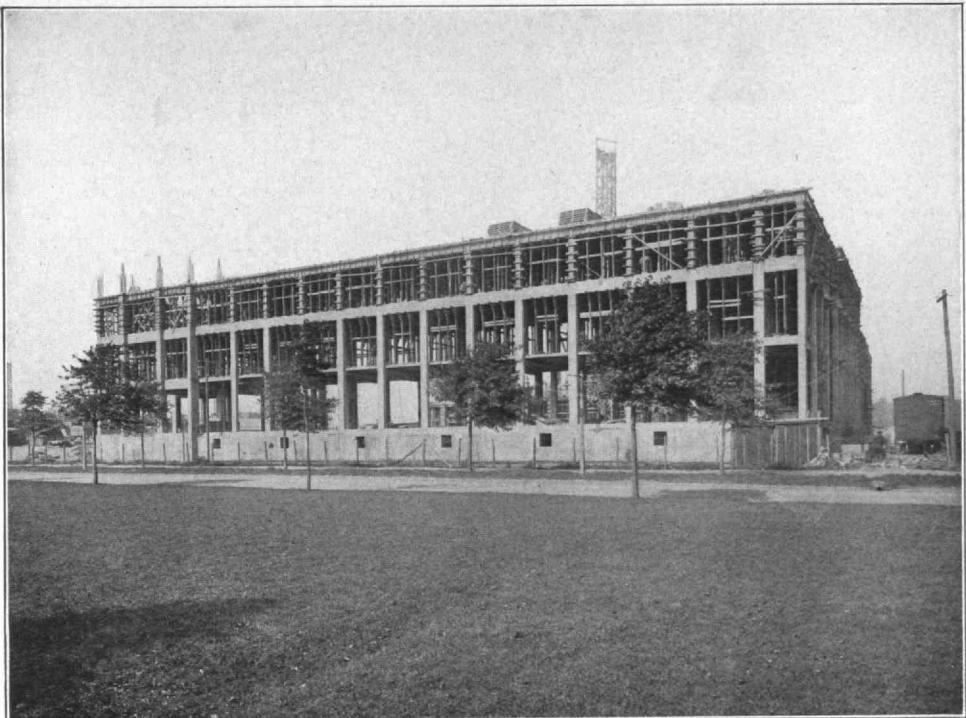
Third Floor Reinforcement, Building No. 1, looking Southeast.



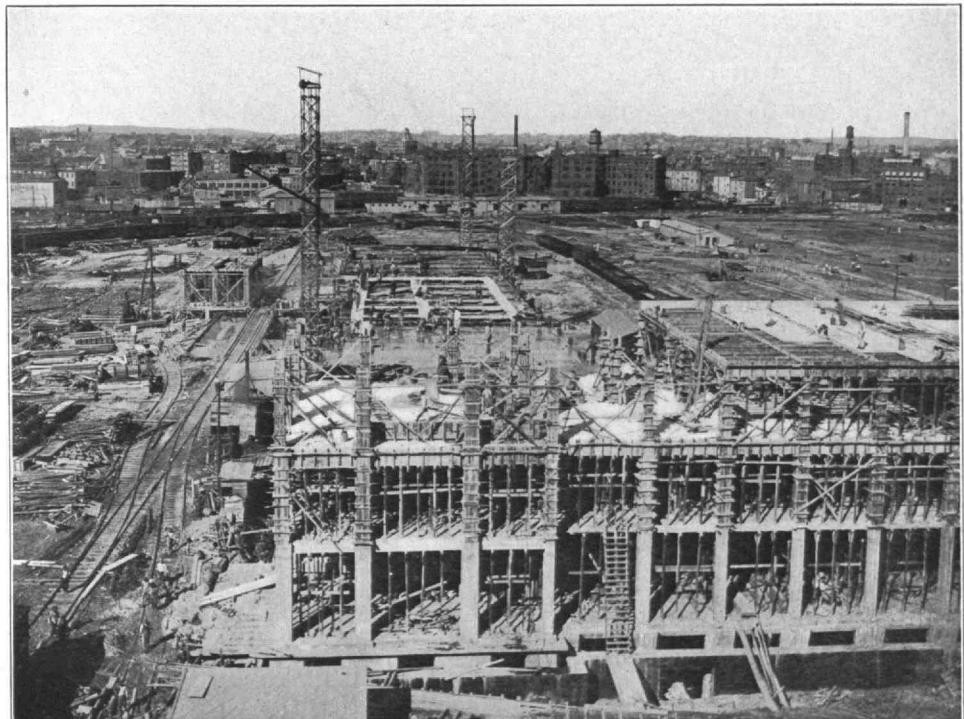
Buildings 1 and 3 looking Northeast from Massachusetts Avenue and Charles River Esplanade.



Buildings 5, 7 and 9, looking Northwest from Building 1.



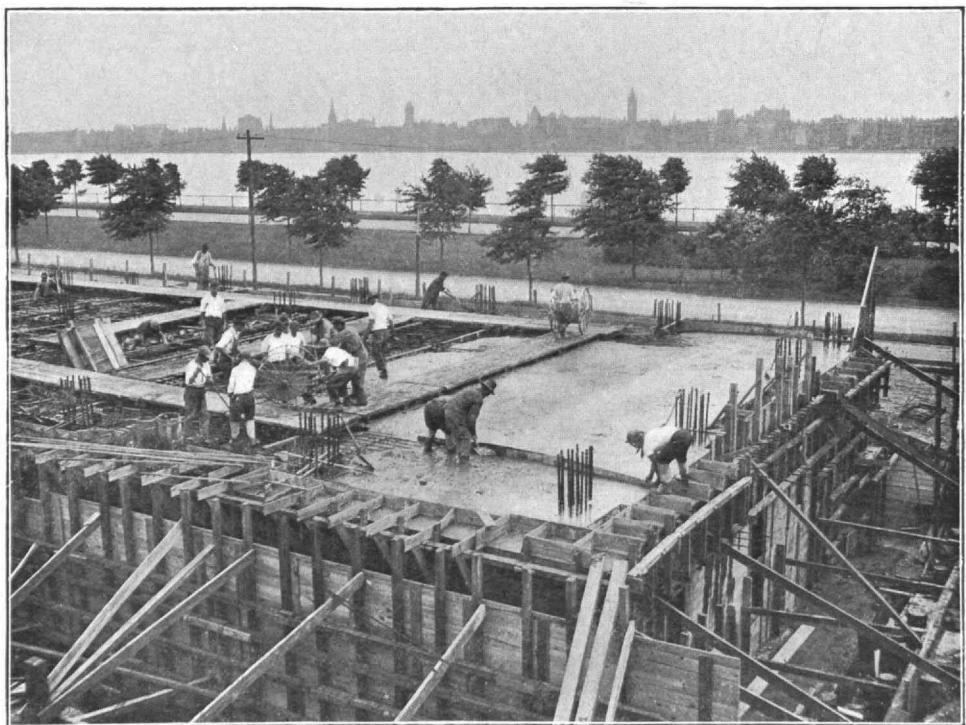
Buildings 2 and 4 looking Northwest from Charles River Esplanade.



Buildings 6 and 8 looking Northeast from Building 2.



From Building 1 looking Southeast across Major Court.



First Pouring of Floor Concrete, Building No. 1, looking Southeast.

When, therefore, the foundations for the entire group, except the library, had been finally laid, the buildings began to rise at the rate of nearly a foot a day, and the passer-by was impressed by the almost miraculous growth which was apparent from day to day. In these days of scientific building operations, advanced records have been established, but it seems almost unbelievable that the best of them can exceed the growth of these buildings during the last two months.

Accompanying this article is a folded insert showing panoramic pictures of the construction, one taken August 24, and one October 19, a period of about two months. The pictures have been taken from the same point and the plates so printed that direct comparisons can be made. This picture speaks eloquently of the masterly way that the Stone & Webster Engineering Corporation has arranged every feature of the work so that the buildings should rise practically as a unit and in record time. Work is still in progress on the foundations of the great library building, which faces the main court, as this can be built with greater convenience after the other buildings have been practically erected.

The total area of the group now going up is not far from ninety thousand square feet. The time table of the engineers from October 1 to December 1, is as follows:

Entire first floor of group to be completed	October 1
“ second “ “ “ “ “ “	October 15
“ third “ “ “ “ “ “	November 1
“ fourth “ “ “ “ “ “	November 15
“ roof “ “ “ “ “ “	December 1

It is interesting to note that up to the present time the schedule has been practically carried out. It may be added that the library building is to be finished as far as the cement work is concerned, on February 1.

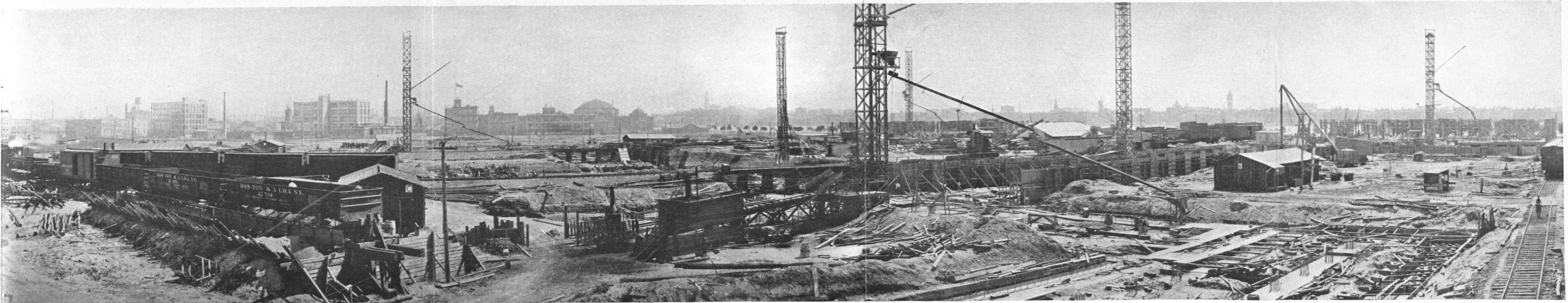
Already the light-face brick, which will line the interior courts of the buildings, have been laid half way up on the north side of buildings 6 and 8, and brick work of the same nature is being begun on the corresponding court on the other side. A large part of the stone which is to be used on the outside of the buildings is on the ground, and the work of erecting it will begin early in November.

One of the interesting laboratory features of the New Technology, which has recently been accepted, is a concrete canal for

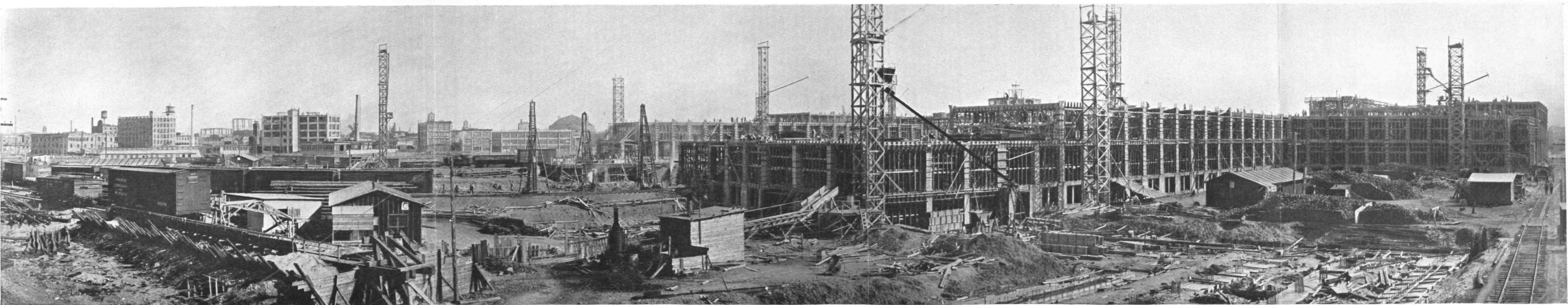
the department of hydraulics. This canal is to be five feet wide and five feet deep, and is to form an elongated oval under building No. 7, where the civil engineering department will be housed. It will receive its water directly from the Charles River, and by the use of a huge circulating pump the supply will be kept in constant motion, thus affording opportunities for the studying of the friction of streams on their beds, tests of velocities, etc. The canal will form a reservoir for many thousand gallons of water that will constantly be drawn upon for the general use of the Institute. In order to facilitate the study of the action of running waters on their beds a part of the canal will have a sand bottom, and various instruments for observation will be installed. In a similar way the pressure of a stream on its banks at its turns, the action of the water on its bed at the bends, the velocity of its waters in the center and near the edges and other matters of importance to hydraulic engineers, will be determined.

The pump to be installed will be one of the largest ever used for experimental purposes. Its capacity will be approximately fifty cubic feet per second. This can be regulated at will for purposes of determining the action of water at various velocities. At the end of the canal will be a penstock for the testing of water turbines. After leaving the turbine, it will pass down a tailrace, going through a series of baffle-boards and screens, and will then start on its rounds again.

Although the heroic size and attractive grouping of the new buildings has begun to impress the passing spectator, one can better appreciate their magnificent proportions from the roofs of the buildings themselves. Even in their present crude condition and without the settings of lawns, paths or shrubbery, the impression they make upon the beholder is profound. Much has been said about the beauties of the Institute as seen from across the river, but from the roofs of the new buildings, as a point of vantage, the view of Boston, from Cottage Farm to the West Boston bridge, is superb. The roofs of the buildings, which are to be provided with parapets, will command one of the most magnificent views that Boston can present, and when, in the future, a great water-gate shall add to the glories of the New Technology, with water-craft moving to and fro, it will be a much-sought observation point, not only by visitors to the city, but by the people of Boston as well.



AUGUST 24



OCTOBER 19

The New Technology looking Southeast across Charles River towards Boston

ALL-TECHNOLOGY REUNION POSTPONED

Alumni Council deems this wise—Committee on Publicity reports and coöperation with Harvard Alumni is discussed

The first fall meeting of the Alumni Council was held at the Engineers Club, Boston, Monday evening, October 26.

Before the regular business of the meeting was taken up, Dr. Rockwell, '96, of the Advisory Council on Athletics urged the members and their friends to attend the Field Day contest to be held at the new track on the Cambridge grounds, November 6; and Mr. Humphreys reported that registration for the present year had reached the high figure of 1,818 against 1,685 last year. Mr. Humphreys also reported that the new course in Business Administration had fifty-seven students registered.

The first business of the evening was the report of the Committee on Publicity, Howard C. Turner, '03, chairman; Prof. Henry L. Seaver, of the Institute, Ingersoll Bowditch, '00, C. A. Sawyer, Jr., '02, and Walter P. Keith, '14. The committee's report is as follows:

Your committee has held five meetings and has had correspondence with thirty foreign undergraduates and graduates, ten members of the American and Foreign Consular Services, and fourteen presidents of alumni associations and editors of alumni publications of American colleges.

Your committee has considered two aspects of the question of publicity: first, how to acquaint young foreigners who desire higher education, with the opportunities the Institute affords; and second, how to acquaint the entire body of alumni with the daily life, official and unofficial, of the Institute.

I.

In the field of foreign publicity we believe that the most effective element is always the graduate, especially the foreign graduate returning to his country, who by success shows what capacity the Institute training may develop. Toward this the alumni can contribute at least indirectly by taking every opportunity they have to help the Institute in maintaining the highest standards of instruction.

We believe, however, that an opportunity is afforded of furthering the Institute by circulation of printed matter in foreign lands. The official publications of the Institute, such as the *Catalogue* and the *Program*, are too bulky and often too technical to make general appeal. They satisfy the specific questions which may be asked by the young foreigner who has already decided to attend the Institute. We believe that a smaller pamphlet, phrased in more general and popular way, with

illustrations, would appeal to the student who, though he might never have heard of the Institute, was proposing to continue his studies abroad. The booklet prepared by the undergraduates, issued in revised form two years ago, entitled "Concerning the Institute," may serve as a model for a similar booklet for foreign circulation. The booklet to go abroad should, we believe, be briefer, include many illustrations, give more information as to entrance requirements, living expenses, special opportunities for foreigners, etc., and should omit much that is merely historical. It should also lay emphasis more on the professional opportunities and less on the social and athletic sides of Technology life.

It would seem to your committee wise to aim chiefly at two fields, that of China and that of Latin America. It is only in exceptional cases hardly to be considered in a campaign of publicity, that European students will prefer the Institute to their home institutions. From the Consular Service the chairman has received a long list of addresses, mostly in China and South America, from which such literature might be most effectively distributed.

For circulation in China, the literature sent by the Institute should, in the opinion of those men acquainted with China with whom your committee communicated, be in English rather than in Chinese. Students likely to come to America are sure to study English, and the Institute pamphlet in English may determine their choice for Technology as compared with other American institutions. If it is printed in Chinese, in addition to the expense of printing in Chinese characters, there may be urged a further objection that the Institute must depend wholly on the accuracy, good judgment, and good taste of a translator.

For circulation in Latin America, however, your committee believes that literature had better be in Spanish (and, if numbers warrant it, in Portuguese for Brazil). Here many young men might be reached who, not yet determined upon a technical career and as yet without any intention of studying abroad, had not begun the study of English.

II.

In considering the second question, viz.: how to acquaint the alumni with the daily life of the Institute, we have assumed that a large proportion of the alumni are interested in the life and growth of Technology and desire to know the main events which mark her social, athletic, or intellectual development. We have assumed, further, that such an interest ought to be encouraged and satisfied, because it may bring to the alumnus opportunities to serve both himself and Technology.

We believe, therefore, that a means should be devised of bringing to the alumni less formal and more timely information about Institute life than the quarterly REVIEW can provide. Indeed, to serve the purpose most satisfactorily, we believe that even the monthly issues of the REVIEW cannot reach the alumni quickly enough. If, as we believe, many of the alumni, especially those that live in New England, desire to know in advance, of lectures or addresses by distinguished guests speaking before professional societies or at Convocation; or of student entertainments, such as those of the Cosmopolitan Club; or of important athletic meets; or of all other occasions of any public appeal,—then some weekly publication is necessary. The alumni associations of larger universities have undertaken weekly alumni publications (such as the *Harvard Alumni Bulletin*, appearing every

Wednesday). These alumni publications include notices of alumni club meetings, of alumni personals, correspondence from alumni, and occasional articles by or about alumni; and this distinctly graduate matter occupies perhaps half of the paper. The other half is given to a record of undergraduate life so far as it is likely to interest the alumni, with full calendar and advance notice of all such affairs as the graduate living near Cambridge would probably be interested to attend.

The publication of an alumni weekly would be costly; and your committee believes that the same purpose may be served by an "Alumni Issue" of the undergraduates tri-weekly paper, *The Tech*. This "Alumni Issue," appearing on Wednesday, would include, reprinted from the Monday and Friday issues, all articles likely to interest alumni; a calendar of coming events; and similar advance notice of important meetings. It would include also a column of news of purely graduate character, the collection of which should be in the hands of a graduate coöperating with *The Tech* board. General-Manager Waitt of *The Tech* reports that such an "Alumni Issue" of 4,000 copies would cost about \$20 an issue, or a total of \$540 for the twenty-seven issues through the school year. The entire mailing expenses except postage would, according to an estimate made by the Boston Mailing Company, be \$16 per issue, or a total of \$432 for the twenty-seven issues. The expense for postage is estimated between \$75 and \$100 for twenty-seven issues against a cost of \$35 to \$40 for the five monthly copies of the *REVIEW*. This is based on a four and six page paper, having sixteen four-paged papers to the pound, and on six copies of the monthly *REVIEW* to the pound.

This estimate of the cost of such an "Alumni Issue" takes no account of an increase of income from larger advertising. The income from paid advertisements in a paper of over 4,000 circulation may fairly be expected to reach a sum such that, with allowance of a reasonable proportion to *The Tech*, the gross cost estimated above may be considerably reduced.

Since such an "Alumni Issue" of *The Tech* would largely absorb the more temporary and informal matter now appearing in the monthly issues of the *REVIEW*, and since the matter of more permanent character now appearing in the monthly numbers could well be included in the quarterly issue of the *REVIEW*, your committee suggests that the Council consider the wisdom, (1) of publishing such an "Alumni Issue" of *The Tech*, to be sent to all the present subscribers to the *REVIEW* without any increase in their present subscription fee; and (2) of substituting this "Alumni Issue" for the monthly issues of the *REVIEW*, devoting to the expenses of this "Alumni Issue" the money now spent for publishing the monthly *REVIEWS*.

In making this suggestion we realize that the plan, unless it should, through increased advertising, prove self-supporting, involves the entire abandoning of the monthly issues of the *REVIEW*; but we ask the Council to consider whether the substituted publication would not be of greater value.

It should not be overlooked that this suggestion is entirely new. No other alumni association, so far as we know, has attempted this solution of their problem, though the letters from those associations indicate that they recognize the value of bringing the alumni into frequent and intimate touch with the contemporary life of the institution, in its Corporation or Faculty or among the undergraduates.

Neither should it be overlooked that such an "Alumni Issue" would much assist the undergraduates, both by bringing them into closer touch with graduate interests, and by widely increasing the circulation of the undergraduate paper.

Your committee recommends that Part I of this report, concerning foreign publicity, be referred to the President and Executive Committee of the Corporation, with request for such action as they deem wise; and that Part II, concerning publicity among the alumni, be referred to the president and executive committee of the Alumni Association, with the further recommendation that, if they deem it wise, the president appoint a committee to consider specifically the practical pursuance of the suggestions above made.

There was some discussion following the reading of the report, after which it was voted to refer Part I of the report, dealing with foreign publicity, to the Executive Committee of the Corporation, and Part II, dealing with *THE TECHNOLOGY REVIEW* and *The Tech*, to the Executive Committee of the Alumni Association.

President Whiting took opportunity here to emphasize the great desirability of keeping in touch with the local alumni associations. It is understood, he said, that members of the Council representing alumni associations should report the meetings to them so that they will feel the close relationship that exists.

In introducing the guests of the evening, Professors Swain, Clifford and Kennelly, who have lately come from Harvard to the Technology Faculty, the first two having been former professors at the Institute, Mr. Whiting said that if the agreement with Harvard brought no other advantage than the return of these men, it will have been very desirable.

Mr. Whiting announced that the subject for discussion was: "Possible coöperation between Harvard and Technology Alumni" with special reference to engineering interests. Why should not an agreement bringing about coöperation between the two engineering schools, also conduce towards coöperation of the alumni of these institutions? No one was better able to discuss this matter, he said, than those who have had experience with both.

Professor Swain expressed his great satisfaction at being again with the Institute Faculty. He spoke of the good results to be obtained by the combined effort of the two institutions, and stated that this object would be furthered if the alumni coöperate. He thought this might specially be brought about in New York where Harvard engineers are probably second in point of importance. He suggested that it might be a good plan for the Council to appoint a committee to consider just what could be done in this direction. He thought it would be desirable if the members of the Harvard alumni could be offered membership in the Technology Alumni

Association. The Harvard engineering schools have a large number of members in this vicinity, and a joint alumni dinner might be arranged.

Professor Clifford expressed his deep satisfaction at the consummation of the agreement and his return to intimate relations with the Institute. He did not feel that he could contribute to the subject of the evening. Although he had given it thought, he did not know what to suggest as a practical working plan. Some sort of coöperation, preferably through the alumni of the Lawrence Industrial School, might be brought about. He believed that it would be a good plan to have a committee appointed to consider it.

In rising Professor Kennelly quoted the remark attributed to the great Louis on the departure of his grandson for the Spanish throne at Madrid: "The Pyrenees mountains are no longer between us." He thought that the new relations existing between Harvard and the Institute could be cemented together by effecting, through some beneficent means, the same thing among the alumni. Time will do a great deal in this direction, but he was fully in sympathy with Professor Swain's suggestion that a committee be appointed to consider it.

Mr. William H. King, '94, past president of the Technology Club of New York, who was called upon by President Whiting, approved of the appointment of a committee to consider the coöperation between the engineering societies of the two institutions. He did not see exactly how this was to be brought about, as each interest had its own particular associations, and even if the alumni did take a step in this direction, it might lack the element of hilarity. He thought that the lines in New York were quite distinct, but a special committee to look into the matter might find a way to try it out.

The matter was then further discussed by Andrew Fisher, Jr., '05, Everett Morss, '85, Professor W. Z. Ripley of Harvard, and Professor R. H. Richards, '68.

Mr. Fisher spoke of the joint meeting of the Tech and the Harvard men which was to be held in New Hampshire this winter, and Professor Ripley thought that such meetings as these were the "fruit and flower of the new arrangement between Harvard and Technology."

Professor Richards spoke of his meeting with about a dozen clubs of Tech men in various cities this summer, and he said that

he would now consider himself a committee of one to get Harvard and Tech men together all over the country.

It was moved that the matter be placed in the hands of the Executive Committee of the Association for further consideration.

President Whiting then stated that in view of the fact that the new buildings will not be complete, and of the conditions brought about by the war in Europe, the Executive Committee had recommended that the grand reunion, which was to have been held in 1915, be postponed. This was agreed to at once, and Mr. Webster made the motion which was carried.

¶ Mr. Litchfield then called attention to the fact that the Pittsburgh men, who had been notified of the postponement of the reunion, and who had been given the opportunity to entertain the Technology Clubs Associated next spring, had responded with alacrity and that they were entitled to the gratitude and admiration of Tech men everywhere. He said that it was up to the eastern men to make just as large a showing as possible in Pittsburgh, who had responded nobly on this as they had on other occasions.

Banquet in Honor of Professor Richards

At the close of the school-year, Professor Robert Hallowell Richards completed 44 years of distinguished service as a member of the Faculty of the Institute of Technology, and 41 years as head of the Department of Mining Engineering and Metallurgy. A member of the first class to graduate, a zealously loyal son of the Institute, a friend of every Tech man, he will continue as professor emeritus both his professional activity and his untiring work in fostering Tech spirit among alumni far and wide. In recognition of this unique service and of the personal loyalty and affection underlying it, a dinner will be tendered Professor Richards by the Corporation, Faculty and alumni of the Massachusetts Institute of Technology on Monday, December seventh, at the Copley-Plaza Hotel. Invitations to this dinner will be sent to members of the Corporation and Faculty and to alumni of Course III and to the Classes of '68, '69, '70, and '71. Other alumni will be welcome, and applications for tickets may be addressed to H. W. Tyler, chairman of committee, 491 Boylston street.

NOMINATING COMMITTEE REPORTS

List of candidates for officers of Alumni Association and term membership on the Corporation with brief sketches

Nominations for officers of the Alumni Association and term members of the Corporation have been reported by the nominating committee and ballots will go out November 20. The polls will close in Boston, December 20. Following are the nominations: for president (one year), Henry J. Horn, '88; vice-president (two years), J. L. Mauran, '89; secretary-treasurer (one year), Walter Humphreys, '97; members of the executive committee (two years), M. C. Brush, '01, W. K. Lewis, '05; for representatives-at-large on the Council (two years), W. D. Coolidge, '96, P. L. Dougherty, '97, Leonard C. Wason, '91, Col. W. D. Sohier, '78, Raymond B. Price, '94; for term membership on the Corporation (five years), M. L. Emerson, '04, Hollis Godfrey, '98, Wm. H. King, '94, J. W. Rollins, '78, W. M. Corse, '99, Jasper Whiting, '89.

The three names receiving the largest number of votes will be submitted to the nominating committee of the Corporation.

Following are sketches of the candidates:

William Malcolm Corse, '99. Graduate in chemistry.

Manager bronze department, the Titanium Alloy Manufacturing Company, Niagara Falls, N. Y.

Home address: 106 Morris avenue, Buffalo, N. Y.

After graduation became chemist for William S. Merrell Chemical Company, Cincinnati, O. In 1901 went with Detroit White Lead Works, Detroit, as Chemist. From 1903-09 was foundry superintendent and assistant superintendent at Detroit Lubricator Company, Detroit. In 1909 became assistant manager, Michigan Smelting and Refining Company, Detroit. From 1910-14 was works manager with Lumen Bearing Company, Buffalo.

Secretary-Treasurer of American Institute of Metals. Member American Institute of Chemical Engineers, American Institute of Mining Engineers, American and International Societies for Testing Materials, American Chemical Society, American Electro-Chemical Society, Institute of Metals (British), Buffalo Engineering Society. Member of Chemists Club of New York, the Buffalo Club, the Wanakah Country Club.

Author of numerous articles on brass foundry metallurgy and practice.

Member and past president of the Technology Club of Buffalo; secretary of the class of 1899.

Merton Leslie Emerson, '04. Graduate in civil engineering.

Treasurer of the Lamson Company; general manager of American Pneumatic Service Company, 161 Devonshire street, Boston; general manager and director of subsidiary companies in various cities.

Residence: Braintree, Mass.

After graduation was aid on the United States Geological Survey; later employed as assistant engineer by the Boston Pneumatic Transit Company, which is connected with the American Pneumatic Service Company; held various positions in the American Pneumatic Service Company and the Lamson Company.

Member of the Engineers Club, New York; Technology Club, New York; City Club of Boston; Business Men's League of St. Louis; Chicago Association of Commerce.

Author of various papers and articles pertaining to special engineering subjects.

Member of various alumni committees, class representative on the Alumni Council, member of the Executive Committee of the Alumni Council.

Hollis Godfrey, '98. Student in 1896-97, 1897-98. Ph.B. Tufts, 1895; Sc.D. (Hon.), Tufts, 1912; F. R. G. S. Two years in Harvard Graduate School, special courses.

President of the Drexel Institute, Philadelphia, Pa.

Residence: 1906 Sansom street, Philadelphia.

Engineer, teacher, writer, during first six years after leaving the Institute. During the last ten years has served as head of the Department of Science, Practical Arts, Boston; chief of the Bureau of Gas, Philadelphia; consulting engineer to various cities, individuals, and corporations, and as lecturer in various colleges; president of Drexel Institute.

Member of the American Society of Mechanical Engineers; of the American Public Health Association, the Illuminating Engineering Society, the Franklin Inn, the Art, the Automobile, the Technology, Tufts, and Harvard Clubs of Philadelphia; of the New York City Club and of the Boston City Club. Member of Theta Delta Chi and of Phi Beta Kappa. Formerly member of the Board of Visitors of Tufts College and of the Trustees of the Garland School.

Author of "The Health of the City" (Sanitary Engineering); two texts in "Elementary Chemistry," four books of fiction, a number of monographs, papers, and essays, largely in pure and applied science and education.

Formerly member of the Technology Clubs of Boston and New York. Now member of the Technology Club of Philadelphia. Served for two years as representative of the class of 1898 on the Alumni Council. Served for seven years on the Class Committee of 1898, during which time was one of the editors of the class books. Has been engaged in various other Institute activities.

William Herbert King, '94. Graduate in general studies. Assistant Corporation Counsel, City of New York.

Instructor Powder Point Preparatory School, Duxbury, Mass., 1894-95. Student Harvard University, 1895-96. Expert statistician, Bureau of Statistics, Washington, D. C., 1896. Fellow School of Political Science, Columbia University, 1896-97, Degree A.M. Student New York Law School, 1897-99, Degree LL.B.

Admitted to Bar of State of New York, 1899. Secretary Justice Supreme Court of New York, Appellate Division, First Department, 1899-1905. Assistant Corporation Counsel New York City, Division of Taxes, 1905-14.

Reviewed Walker's "Economics and Statistics," *TECHNOLOGY REVIEW*, 1900.

Member Board of Governors, Technology Club of New York, 1907-08. Secretary of the Technology Club of New York, 1908. President New York Technology Club, 1911. First president of the Technology Clubs Associated, now vice-president Alumni Association.

James W. Rollins, '78. Graduate in civil engineering.

President, Holbrook, Cabot & Rollins Corporation, contractors, Boston, Mass.

Practiced civil engineering, 1878-96.

Assistant engineer, Massachusetts Central Railroad. Chief engineer, Atlantic & Danville Railroad. Division engineer, Union Pacific Railroad. Assistant engineer, Old Colony Railroad. Chief engineer, Plymouth & Middleboro Railroad. Assistant engineer of Construction, New York, New Haven & Hartford Railroad.

Of Holbrook, Cabot & Rollins Corporation, contractors, Boston, 1896 to date.

Member of the American Society of Civil Engineers. Member of the Boston Society of Civil Engineers and vice-president of same in 1911 and president in 1912. Member of Boston City Club and vice-president, 1913-14. Member of Brookline Country Club, Algonquin, Boston Athletic, Engineers, University, and Technology Clubs of Boston, and Technology Club of New York.

Member of Executive Committee, Technology Alumni Association, 1906-07. Chairman, Massachusetts State Aid Committee, 1911. Member of present Alumni Fund Committee; vice-president, Alumni Association, 1911; president of Alumni Association, 1912; president, Technology Clubs Associated, 1914.

Term member of Corporation, 1908-13.

Jasper Whiting, '89. Graduate in mining engineering and metallurgy.

President, The Whiting Company, 89 State street, Boston, Mass.

1889-1900: After graduating from the Institute, entered the employ of the Illinois Steel Company, Chicago, first as chemist, later as superintendent of blast furnaces, and finally (1895-1900) as manager of its cement department. Developed the Whiting Process for the manufacture of cement from waste blast furnace slag. 1900-02: Traveling in the Far East. Acted as war correspondent of *Westminster Gazette* of London during the Boxer uprising in China. 1906-11: Organized The Whiting Company. Developed the Whiting Process for the electrolytic production of chlorine and caustic alkali from common salt. 1911-12: Traveling in the Far East. Member of the American Electro-Chemical Society, Society of Chemical Industry, Boston Chamber of Commerce, the Union Club of Boston, Tavern Club, and Engineers Club.

For two years was special lecturer at the Institute; author of numerous articles in scientific and other publications.

Special Commissioner to China for Technology, 1911.

For two years class representative on the Alumni Council; treasurer of the Committee on State Aid, chairman of the Committee on a Course in "Business Engineering," member of the Executive Committee of the Alumni Association 1913; president, 1914.

TECH'S NEW ATHLETIC FIELD

The Track is said to be unequalled anywhere in the world—It is completed and is in use by the students

The new athletic field of the Massachusetts Institute of Technology located within the grounds at the new site in Cambridge, which is now complete and which was used for the first time at the Tech-Harvard meet October 24, is declared by experts to be without equal in the entire inter-collegiate world, and if such a conclusion could be verified would undoubtedly hold the same position compared with the fields elsewhere in use in the athletic world.

Like other things at the new Technology, the field and its equipment not only meet the present needs but look to the future, and for intercollegiate meetings provide for generous expansion. The enlarging of the number of competitors, which was instituted last year at a championship meeting, shows the necessity of better facilities for conducting such events. At no other grounds can these new requirements be met with such ease and equality to all contestants. Every conceivable point of advantage has been thought out carefully and included.

The sprinting straightaway is 250 yards long and 27 feet and 6 inches wide, and provides ample room for the slowing to a walk at the conclusion of the 220 dash and hurdle events. It allows six hurdles abreast, thus eliminating much of the expenditure of energy so needless and so rightly criticized at the last inter-collegiate championships. A heat of eight men can be run for the dashes with ample room and, if deemed necessary, ten men can be run abreast without serious danger of interference.

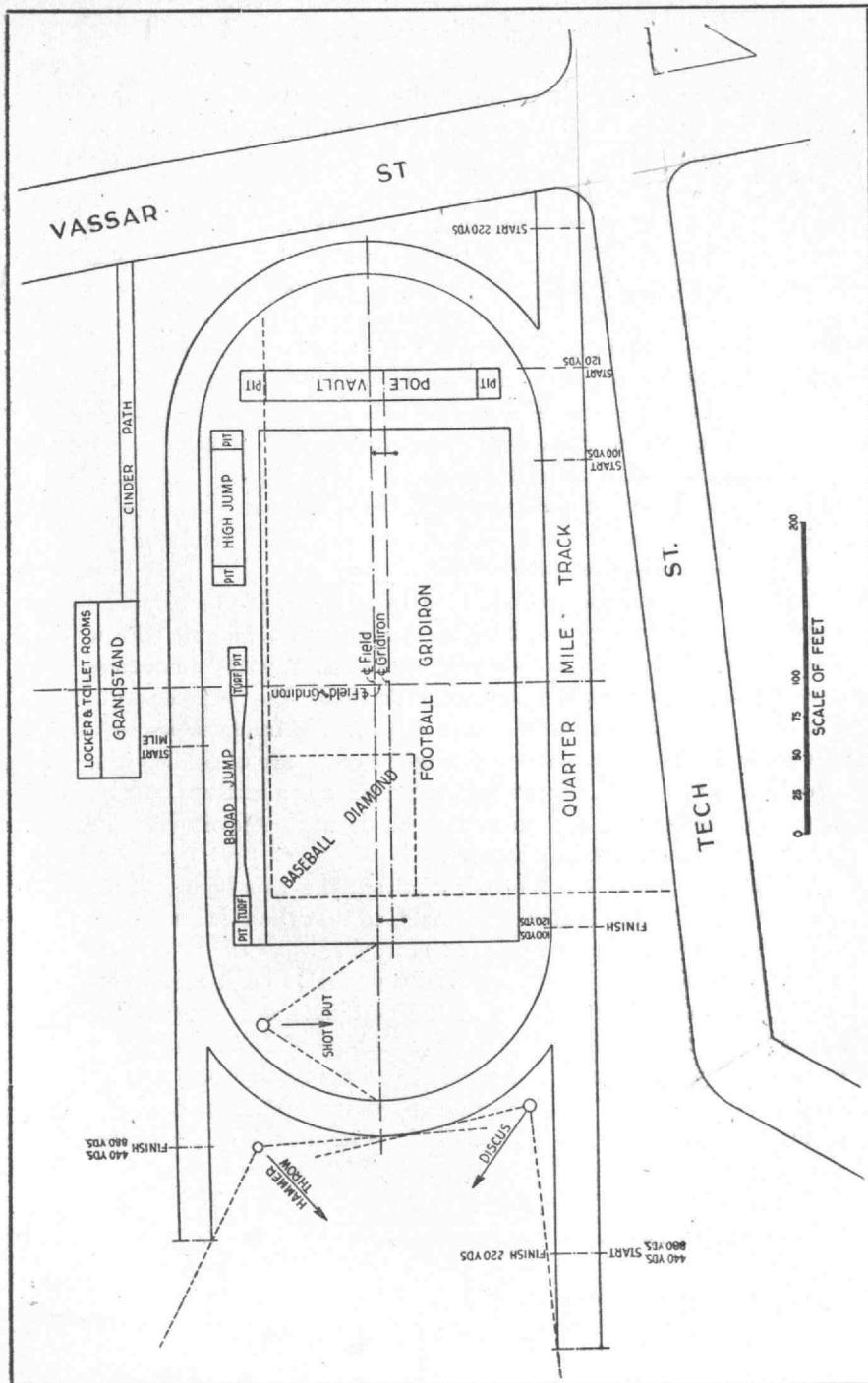
At all other points the track is 20 feet wide and with the curves 345.58 feet long and the sides 314.42 feet, which it is believed will meet all the speed requirements.

The 440-yard run can be made on one turn and finish at a point more advantageously situated for both competitor and spectator than at any other known track. The 880 may be run with three turns according to the popular notion now among competitors in this event.



MAJOR FRANK H. BRIGGS, '81

The creator of Technology's sane athletic policy, to whose energy the perfection of the new athletic field is chiefly due



NEW TECHNOLOGY FIELD

One unique feature is that the straightaway runs and the hurdle events can be run in either direction so that contestants will not have to contend with the sun or wind in their faces.

The field events, jumping and vaulting, are especially taken care of by having pits at each end of the runways and thus allowing advantage in point of the direction of the wind without causing change in the take-off marks so necessary to proper jumping. Also the idiosyncrasies of men in these events seem to be cared for as at no other grounds, since the runways allow of approach from any allowable angle without putting the man to any disadvantage.

The weight events are all taken care of in separate circles, thereby allowing men in their respective events to practise without waiting for those who may be using the circle for other events. The places of practise and competition are situated so that the danger of being struck has been minimized, and, save under conditions of great carelessness, really eliminated.

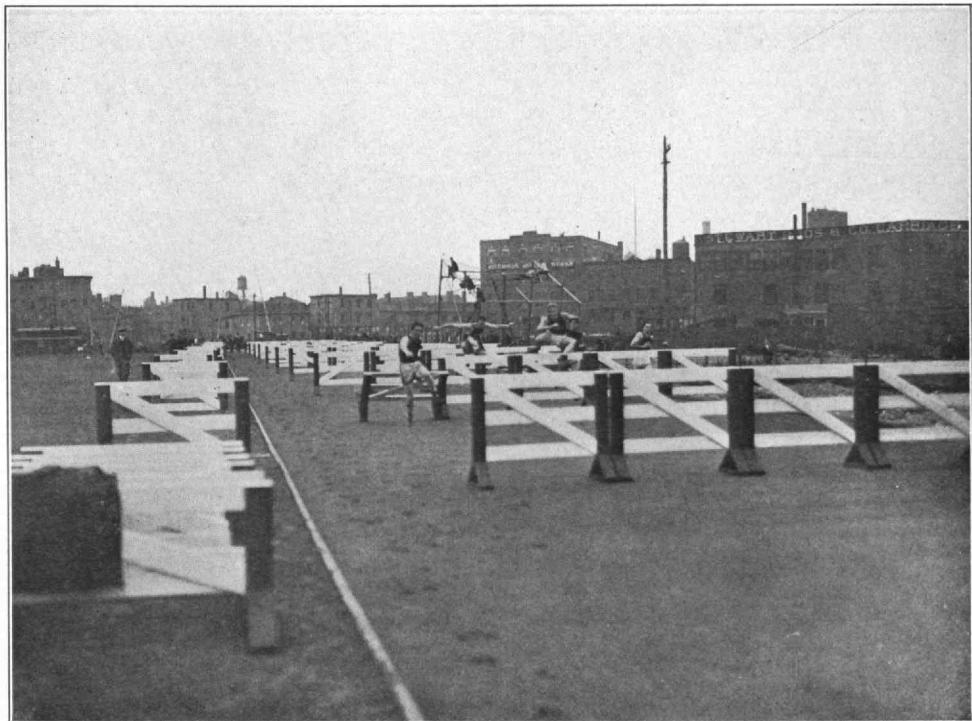
In the southwest corner inside the track is a shot-put ring, and outside the track near the southwest corner is a hammer-throw ring with cage of special construction for M. I. T. with 120 degrees opening so placed that it is impossible to throw the hammer on to the track. In the opposite corner outside the track is placed a discus ring. All these places for weight events are of similar construction to the track, except that the surface is a mixture of clay, loam and cinders. Each place has an iron ring level with the ground and seven feet in diameter.

Within the track is a football gridiron, the axis being placed rather easterly of the center of the field, so that the side line of the gridiron is 20 feet from the side of the track.

The lines of the field are practically perfect, and it merely remains for time to determine that the materials and construction are equal to the planning. Fred W. Rubien of New York, well known in athletic affairs and architect of many tracks, drew the original plans for the track and arranged the system of drainage under the eye of Major Briggs. This system is very elaborate, covering the whole interior of the field. There are porous farm drains four inches in diameter running across the field east and west every ten yards, two feet below the surface and connecting with a main drain lengthwise of the field. There is a similar drain six inches in diameter underneath the entire length of the track and connecting with the field drainage system.



The Two Mile.



The Low Hurdles.



Temporary Grandstand, with New Buildings beyond.



Start of the 220

The first Track Meet on the new field — Technology vs. Harvard, October 24, 1914.

Around this drain for a depth of six inches is a bed of coarse cinders; above this a two-inch bed of cinders which have been run through a three-fourths inch mesh screen, and above this is a four-inch bed of steam boiler cinders and loam in equal parts, these having been put through a five-sixteenth-inch mesh screen. These beds have been successively rolled with heavy steam rollers throughout construction. Much praise is given to the Stone & Webster Engineering Corporation in providing everything that was requested. For the actual construction, the services of the best expert in the country, W. H. "Sparrow" Robertson, were secured, and the work has been in every particular precisely what he has desired.

For the present uses of the students who have already begun regular practise on the Tech field, temporary lockers and showers have been provided and the grand stand is also temporary. It is placed far enough from the field and a sufficient height to allow all the spectators a view without change from the sitting position. From the point of view of the competitors, there is the advantage that they may do their work without the sun in their faces, while the spectators will be so placed that their backs will be to the sun in the afternoon hours. For the planning and the energy to carry the plans to completion, all Tech men unite in praise to Major Frank H. Briggs, who for so long a time has been the main-stay of the work.

FRANK M. KANALY,
Instructor in Physical Training.

The Ninety Tea Kettle

With its usual enterprise the class of '90 has already begun to make preparations for its twenty-fifth anniversary, which occurs in 1915. In anticipation of that event and to stir up interest in the class, the first issue of *The Ninety Tea Kettle* has been published, to be followed by others throughout the year. This is full of interesting news regarding members of the class, grinds, alleged poetry, editorials, cuts, etc.

The class committee has arranged to hold the reunion at the Hartford Yacht Club, Saybrook Point, Conn., where '89 had such a glorious time last June. It is planned to make this the most memorable occasion that any class has had anywhere.

LARGE INCREASE IN REGISTRATION

Number of returning students unusually large at Technology—
Foreign contingent little affected by the war

Student registration at the Institute this year has exceeded previous figures by a larger increase than ever before. The total number of students registered this year is 1,818, an increase over last year of nearly 150. The increase is due to a number of causes, probably the strongest being the material advances that the Institute has made during the last few years which have placed it more in the public eye than ever before. As a matter of fact, however, most of the colleges have had increased attendance. This is explained by some on the ground that the younger men are not lured into business fields by attractive positions at the present time; the breaking out of the war and the condition of business in this country are thus effecting an increase in the number of college students.

At the Institute more than a thousand members of the regular classes have returned to continue their duties, and another hundred are back pursuing post-graduate work. Eighty-six per cent of the freshman class of last year are again at their desks, which is evidence of the continuity of study that is unusual in most educational institutions. The sophomore and junior classes have returned with about eighty per cent of their former members.

Another fact in the general increase is the growing number of students from other colleges who come here for courses more or less advanced. The number now in attendance is over two hundred, or 10 per cent more than last year. The number of freshmen registered is four hundred and ten.

The European situation seems to have had little effect on the foreign registration, although a few of the students of Europe have withdrawn to enter the armies of their respective countries. From England, Bavaria and Russia one student each is now registered in the freshman list, while three of the newcomers hail from Turkey. Africa sends one from the Cape Province, a Ph.G., who comes to specialize in chemistry, while South America returns a number of former students together with two from Colombia and

one from Peru. In North America, Mexico is represented by two and Guatemala, Honduras and Cuba, one each, while from Canada there are three first-year men. With reference to the Chinese group it apparently is maintaining its figure at about forty. There are seven now registered as freshmen, while eight or ten new ones have appeared for advanced or post-graduate work, some of these men in chemical engineering and two at least in the new courses in aeronautics, and at the same time the majority of the undergraduates have returned with the other members of their classes.

With reference to women students at Tech, there are already ten on the lists, and in them the general ratio of distribution is kept up.

Pittsburgh Invites You

In view of the fact that the Institute buildings will not be done until the spring of 1916, it has become necessary to change the program of the Technology Clubs Associated.

The meeting of the associated clubs will be held in Pittsburgh next year instead of in Boston, and the Technology Club of Pittsburgh has already begun active preparations for the entertainment of the visiting Tech brethren.

To those who do not know the temper of the Pittsburgh crowd we will say that nowhere is there stronger loyalty to the Institute or more cordial hospitality extended to Tech men than at Pittsburgh. This association claims the honor of ranking third among Technology alumni associations, outside of Boston, and the rivalry of Cleveland for the same honor will inspire our Pittsburgh friends to put forth every effort to maintain their contention. Details of the meeting of the associated clubs will be given later.

James W. Rollins, '78, of Boston, who was elected president last year, has resigned; also Andrew Fisher, Jr., '06, as associate secretary; and in their places Morris Knowles, '91, of Pittsburgh, has been elected president and Harry A. Rapelye, '08, secretary of the Technology Club of Pittsburgh, has been made associate secretary.

A large contingent is expected from Boston and New York, and the geographical position of Pittsburgh should insure a large attendance from all the enthusiastic associations located within easy reach of that city.

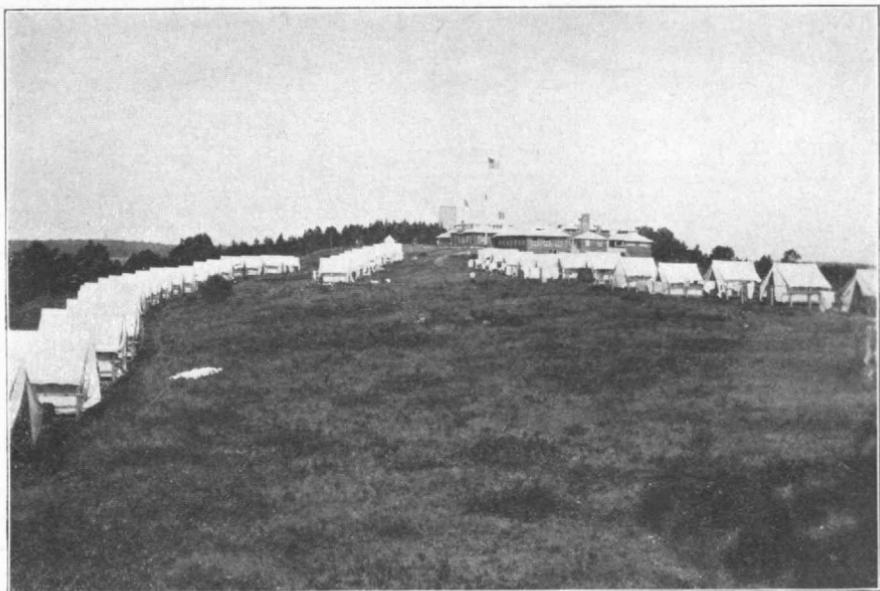
CAMP TECHNOLOGY—SEASON OF 1914.

An unusually successful and satisfactory season—The Eaton Athletic Field opened—Social side of camp life delightful

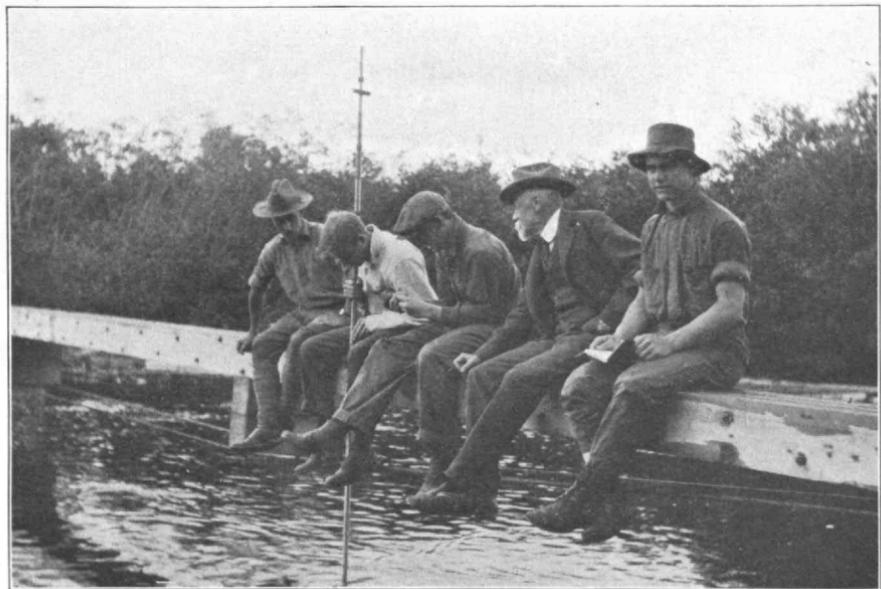
The recent session of the Summer Surveying Camp was marked by the largest attendance yet recorded, consisting in all of ninety-five students, of whom eighty-five came from Courses I, III and XI, in which attendance is required; seven were from other Institute courses; two were from other colleges, and have since entered the Institute, and one was an older man connected with work requiring a knowledge of surveying. The instructing staff included Professors A. G. Robbins, '86, A. E. Burton, C. B. Breed, '97, G. E. Russell, '00, G. L. Hosmer, '97, J. W. Howard, '03; and Messrs. T. F. Comber, Jr., '14, W. C. Eberhard, '14, E. H. Magoon, '14, and J. C. Morse, '14, all of the regular department instructing staff; Professor A. R. Cullimore, '07, formerly connected with the civil engineering department of the Institute, now professor of civil engineering at Toledo University; Messrs. A. H. Bond, C. L. Hall and J. A. Steere, student assistants. The resident physician was Dr. H. H. Howard, a graduate of the Harvard Medical School of the class of 1912.

The total number at the camp this year including instructing staff, students and employees was 120, sufficient to require a special train of four cars for transportation. This train, after unloading at East Machias, was sent directly to Bar Harbor to take passengers arriving the same morning on the *Kronprinzessin Cecilie*, the Hamburg-American treasure ship driven back to this country by the declaration of war between Germany and England. All arrangements for transportation to and from East Machias were made by Mr. H. S. Ford, bursar, to whose efficient management and active interest the thanks of the department are due.

While work and life at the camp went on during the year in much the same manner as in other years, this session seemed on the whole more successful than in previous years. Among the causes which contributed to this was the development and execution by Professor Hosmer of a more systematic plan for allotting the field-work than had previously been employed; and the



View of Tents and Buildings



Stream gauging under the direction of Mr. Desmond Fitzgerald of the Corporation

SCENES AT SUMMER SCHOOL

introduction of two evenings a week of class-room work, the field exercises on these days being shortened somewhat in order not to exert too much pressure on the students.

Another noteworthy improvement was in the quality of the food served. In previous years, some of the meat purchased locally failed to prove entirely satisfactory. This year, all the beef and the larger portion of the other meat used was purchased in the Boston market, thereby obtaining better quality at little, or no increase in price. We continued to secure milk and butter from the Drisko Farm at Addison, about fifteen miles from camp, and in addition obtained seasonable vegetables and other farm products from the same source, thus insuring a supply of excellent milk, pure butter and fresh vegetables. Doubtless, much of the gain in weight spoken of later was due to the quality of Professor Drisko's farm products. We also raised this year enough potatoes on our farm property to supply the camp and to leave a surplus of twenty bushels for shipment to the Tech Union in Boston. We expect, next year, to raise a still larger variety of vegetables on our camp farm.

The camp property has been improved during the year by the addition of a stream gaging station; the practical completion of Eaton Field, the athletic field donated by Mr. Charles W. Eaton, '85; and the construction of a large flag pole, paid for by money raised last year by the class of 1915, and coming to a considerable extent from the proceeds of the Technology Minstrel Show of that year.

The construction of the stream gaging station required the building of two bridges across Chase's Mill Stream, and the straightening of the banks between these bridges. This station has made it possible for us to handle an increased number of men per instructor in one gaging party.

All financial matters connected with the operation of the camp, including the purchase of supplies, were under the direct supervision of Professor Russell, who handled the problem with characteristic thoroughness and efficiency, and to whom much credit should be given.

It is an interesting fact that, in spite of the physical activity required of those in attendance at the camp, the aggregate gain in weight of students and instructing staff during the season was nearly *half a ton*, or, more exactly, eight and one-half pounds per

person. Some of this gain may undoubtedly be attributed to the regular life in the open air, accompanied by long hours of sleep, bedtime coming for all at ten o'clock. A part, however, may be assigned to the good quality of the food served.

The athletic field was found to be especially valuable as a means of recreation and was the scene of many ball games among the Inter-Camp League of four ball nines. The prize for which these teams contested was a silver loving cup presented by Mr. Eaton.

As in previous years, a successful performance by the Technology Minstrel Troupe was given on the Saturday night before Labor Day at the East Machias Town Hall; the profits of this are to go to the Camp Improvement Fund. Labor Day was begun by cleaning the grounds in the vicinity of the camp of loose stones and bushes and by decorating of the buildings in preparation for the annual "open house" kept each year on Labor Day afternoon. The latter part of the forenoon was occupied by field and water sports which were won by Mr. C. W. Loomis of Course XI, president of the sophomore class last year. In the afternoon the camp was visited by several hundred people from the surrounding villages who came in carriages, automobiles and boats. Refreshments were served and the drafting room was given up to dancing.

Among visitors during the camp session were Messrs. Desmond FitzGerald and Charles W. Eaton, both of whom addressed the students on Sunday evenings. The camp was also visited by Prof. Robert Spurr Weston of the biological department, B. Kabatznick, art dealer of Boylston street, and Mr. H. S. Ford, bursar.

It is a great pleasure to instructing staff and students to receive such visitors at the camp, and the writer is sure that he represents their wishes when he extends thanks to all these gentlemen for their interest in the camp welfare.

Gifts to the camp this season in addition to those already mentioned included a set of valuable books upon trees and flowers of North America, presented by Robert Spurr Weston, and an excellent framed picture by B. Kabatznick. The department wishes to acknowledge its indebtedness to these gentlemen.

CHARLES M. SPOFFORD, '93.

WAR TALKS MAKE A HIT

Enterprising departure of the New York Technology Club very much appreciated—Club is pushing ahead rapidly

Although the Technology Club of New York has been extremely active in the past and has started many important enterprises which have redounded to its credit and to the benefit of the Institute, the general activity among the several committees has probably never been so great as at the present time.

During last summer and early fall the Entertainment Committee provided a series of interesting evenings and laid out a varied program for the entire winter. The most attractive feature of the entertainment program to date has been a series of war talks given immediately after luncheons, by men of prominence whose expert knowledge or experience has made the talk of first interest.

The list of speakers at the war talks, which, by the way have attracted from seventy-five to a hundred and twenty-five members each time, is as follows: Mr. Otto J. Merkel, "Why Germany Declared War"; Mr. Henry Woodhouse, editor of *Flying*, "The Use of Aeroplanes in the War"; Professor M. I. Pupin, of Columbia University, "The War from the Slav Viewpoint"; Mr. Gerard Swope, '95, "Getting Away from France and Belgium"; Rev. J. F. Stillemans, president of The Belgian Bureau, "Belgium"; Mr. John E. Gardin, vice-president, National City Bank, "The Collapse of the International Commercial Fabric"; Dr. Hugo Lieber, "How Germany Views the War"; Mr. John P. Gavit, managing editor, the *Evening Post*, "War News, from Behind the Scenes"; Captain R. S. Allyn, '98, "How New York Would be Defended in Case of War"; Mr. Morris Hillquit, "After the War—What? From the Viewpoint of Socialism"; Mr. George A. Hutchinson, '98, "The Situation in Mexico"; Prof. Ellery C. Stowell of Columbia University, "How Neutrality Affects the United States"; Dr. Frank H. Vizetelly, editor, Standard Dictionary, "France in Wartime, 1870"; Mr. Melville E. Stone, general manager of the Associated Press, "The Censorship of the Press"; Mr. Oswald G. Villard, publisher, the *Evening Post*, "The American Viewpoint Toward Germany"; Major John Bigelow, "Neutrality"; Mr. Hudson Maxim, "Explosives in War."

The prominence of the speakers and the enterprise of the club in providing these war talks has given the club considerable publicity in the New York press.

The entertainments for the winter include a series of club smokers, club nights, class nights and course nights, a special Christmas dinner and also a special New Year's dinner.

The evening speakers this fall have been Mr. Geer, who gave an interesting address September 15th on scientific boxing, at which three or four boxing bouts were scheduled. On October 6, Mr. Henry Bruere, city chamberlain of New York, told of the work of the city departments; and on October 20, Roger Babson, '98, talked on the Causes and Results of the European Conflict to about a hundred and fifty members of the club.

For November, talks are scheduled by Mr. Prentis, who will give an illustrated address on the growing, harvesting and marketing of cork, and on November 17th, a lecture will be given by Mr. Barnes on the banana plantations of Guatemala.

One of the special features of the winter program will be the throwing open of the club house to all Tech men who are not members of the club, on class nights and course nights.

The Stein Room has had especial attention and is destined to become one of the most unique club rooms in America. The stein and pipe panels, which have already netted a very large sum, are being taken right along by club members. These panels sell for from twenty-five to ten dollars, which includes a pipe and a stein properly engraved. The panel is the particular property of the buyer so long as he is a member of the club. Probably within the next month some of the new mural decorations for the Stein Room will have been completed. The scheme of decoration includes a frieze around the room descriptive of the life of the beaver; there will be about fifteen beavers in all in this frieze. In three panels will be paintings representing chemistry, engineering and architecture; the panel representing architecture will be a reproduction of the new Tech buildings. In another panel will be a stein scene treated decoratively; while the largest panel of all will be representative of the spirit of Technology.

The Business Opportunities Committee, under the chairmanship of Mr. Kaludy Spalding, '85, has been very active. Earlier in the year the number of employers desiring men was about equal to the number of applicants; latterly, however, the number of appli-

cants has largely exceeded the demand. The list of openings and of applicants is published each month in the bulletin of the club.

It is a pleasure to announce that the club restaurant which has always had a good reputation has improved both in the quality of the food and the service, and in addition to the *table d'hôte* meals *à la carte* service has been established in response to a general demand.

Trip of the Musical Clubs

The concert season of the M. I. T. Combined Musical clubs will open on the evening of November 17 with a concert at the Franklin Square House, Boston. It is prophesied that this will mark the opening of one of the most successful seasons in the career of the musical organizations, which have been in existence since 1881. This prophecy is based upon the enthusiasm displayed at the initial tryouts, where some one hundred and twenty-five men reported, and upon the abundance of unusually good material.

The position of general manager is filled by Allen Abrams, '15, of Butler, Pa. Abrams came to the Institute from Washington and Jefferson College, where he took an active interest in the Glee club management. The other managers are: R. B. Walter, '16, Glee club; W. B. Ford, '17, Mandolin club; H. S. Ford, Banjo club. The leaders of the respective clubs are: W. S. Ogden, '15, K. T. King, '15, and R. H. Dickson, '15. The finances of the combined clubs are looked after by George R. Duryea, '06.

As an added incentive to the men to do first-class work, the management has decided on a midwinter trip to be taken the first week of February, the vacation between terms. The trip will probably include the following cities: Montclair, N. J., Philadelphia, Butler, Pa., Pittsburgh, Rochester and Schenectady. The last attempt in this line was made in 1910, when the combined clubs went to Chicago, stopping at various cities en route. The trip planned for 1915, while not as extensive as the earlier one, promises to be as successful.

An early start has been made in the procuring of engagements. All that is now required to insure the success of the undertaking, is continued, persistent effort on the part of the members, together with enthusiastic alumni support.

PUBLICITY IN CHINA

How our Chinese Students are helping to make Technology known in their native land

Following the Commencement exercises at Technology by a month, the newspapers in China made note of the event in the form given below, which is reproduced from a clipping from the *Shun Paö* of Shanghai of July 15. The line on the right indicates the source corresponding to the announcement in English, "Special Despatch by Wireless," the heavy type in the second column is the heading, and the columns following from right to left give the story of how President Maclaurin gave the diplomas in Huntington Hall to a great number of young men. Still farther to the left is the heading of the Chinese graduate list—of which there are eighteen names in the columns that resemble a table containing repetitions of the same character in several of them—and to the left still is the finish of the story.

At the desire of the Chinese students who were graduating, Mou Ching Hou, B. S. '12, of Tan Yang, China, who was a student in the department of naval architecture and marine engineering, and who is also secretary of the Chinese Students' Association of this city, prepared the original story. This was an abbreviation of the regular press story at the time, modified to fit especially the Chinese. It represents Dr. Maclaurin as giving the diplomas himself, and the President's name as it appears in the Chinese characters is at the bottom of the first column of text. There is a regular logotype for "president" and "Maclaurin" is spelled phonetically.

The table on the left presents at the top the names of the young men, of whom there were seventeen, but one of them, Hou-Kun Chow, had taken two courses and appears twice, making the number of columns eighteen. These present the names, home addresses, courses, degrees conferred and titles of these graduates, and will serve to show to the Chinese readers the kind of work that is being done at the Institute.

Technology carries on its roll a higher ratio of foreign students to home ones of any college in the country. It has been a systematic part of its policy to maintain a school of such rank that students from abroad will come to find advantages that no school of their own land can furnish. For this reason Russia, which is the home of mines and has enormous undeveloped resources, is now sending here regularly assistants of its great schools, three such men, including Professor Henry Tschetschott of the St. Petersburg Mining Institute, who is to return next term, having used the vacation time for a tour of American mining localities.

Chinese have come to the Institute quite largely to study in the department of naval architecture, and of the graduates in June, five were from this department. Such instruction will presently assure in Eastern waters a very thorough understanding of the newest principles and methods. The Japanese a few years ago were eager to seize the same opportunities, but in a measure that nation has established its own schools. That the Chinese students have heretofore given preference to the naval courses is due in part to the fact that they were at first sent mostly by the Government. The United States refunded to China the surplus of the payment on account of the Boxer injuries, and this the Oriental government converted into an educational fund for Chinese students in America. Being sent by the nation it was but natural for the selection to be made of that arm of the public defence service that is taught in the colleges; hence the first Chinese were nearly all navals. Now, however, the current has changed a good deal and a large proportion of the students come from private or commercial initiative. For reasons like this there were in the group graduating last June five naval architects out of fourteen men, two being from the electrical and two others coming from the civil engineering department.

Technology has had for some time a regular plan for acquainting foreign institutions with the lines of its education. It has feelers

out in South America, and gets from the east coast quite a number of students. The problems of the west coast are still difficult and must remain so when great states like Chile furnish free education, even to college degrees, to those of its citizens who wish to take advantage of their opportunities. Contrasted with such liberality, the cost of an education in the United States, where a thousand dollars a year is the minimum expenditure, seems large.

In the Orient, however, the advantages of education in the United States are appreciated and hundreds of students come every year. To foster this and to determine so nearly as may be the conditions in Eastern countries, Technology a couple of years ago gave to Jasper Whiting of Boston a special commission, and during a trip to eastern Asia and India steps were taken to place the two countries in educational accord. The note in the *Shun Paö* is, however, the first of the immediate contacts with the people, and its message of the excellent work of its students in Technology has been echoed by half a dozen other papers of the country.—*Boston Transcript.*

The Pratt Bequest

About the middle of September the full bench of the Supreme Court of Massachusetts decided that the Institute of Technology should receive the \$750,000 fund for a School of Naval Architecture as provided in the will of Charles H. Pratt, provided that the second and unattested signature of the will be stricken out on an amendment of the petition for the allowance of the document. The motion to amend was made by C. F. Choate representing the Institute on October 24, and Judge Hammond of the Supreme Court allowed the motion. Exceptions were taken, however, by Sherman L. Whipple, representing the contestants who took exception to the ruling, who may take the matter again to the full bench on the question of whether the motion should not have been filed in the Probate Court instead of the Supreme Court. If it should have been filed in the former, then the time for filing has expired. Mr. Whipple stated that he should ask the Probate Court to reopen the case on the ground that it had no right to allow the will in the first place when there was one signature to it that was properly not a part of it. Judge Hammond said that he thought that the Probate Court could allow all or part of a will that it saw fit.

ARCHITECTURE AND THE PRESENT CRISIS

The field of the architect particularly affected by the establishment of new and better standards that will follow

In this year 1914 the Architectural Department opens under conditions that are unexampled; all Europe is at war and on a scale never known before in history. The great architectural monuments of Belgium, France, Austria and Germany are imperilled, and in many cases they, with their allied masterpieces of painting and sculpture have been wantonly destroyed, while it is impossible to say where and when the vandalism will come to an end. There is no exaggeration in saying that the only recorded parallel is to be found in the incursions of the northern barbarians who in the end brought about the fall of Rome and the close of Roman civilization.

The magnitude and peculiar terror of the present conflict have seized on the imagination and concentrated the interest of the world as never before, while the momentous nature of the stakes for which a divided world is playing makes all else seem insignificant. It is no doubt hard, therefore, to turn from Armageddon to a drawing board, from bulletins to a lecture room, with the destinies of the world in the balance; hard to recognize the due importance of one of the "Arts of Peace" when there is no peace and only a dim hope of its ultimate arrival before it is too late.

And yet, it is exactly at a time like this that conscientious and devoted study of the arts becomes most important for those not as yet involved in the whirlpool of war; that the study of architecture, for example, takes on the aspect of a duty rather than of an avocation.

The civilization of five centuries is being sifted as wheat, and it is impossible to doubt that in the event the grain will be well separated from the chaff, and as a result higher principles, better methods and more worthy objects will prevail, for a time at least. It is just here that the work of the architect will find its opportunity, and in greater measure than for many generations. What, when the question is analyzed, is the real object of architecture? It is not the furnishing of a certain type of attractive goods, in a popular style, for those in a position to pay the price: it is the ex-

pression in visible and enduring form of the best that is in any people at any given time. Now this "best" includes many things: note particularly that architecture does not (or should not) express the general average of a people, computed on any basis of "majority rule" as if it were a popular election. Architecture, or any other art, that tries to do this results in chaos; instead it very particularly does (or should do) the exact opposite. The art of Greece, if it had been a faithful exponent of the average civilization of Hellas, would have been an exceedingly unpleasant exhibition, and very different in type and standard to the Parthenon, the Venus of Melos and Antigone. The same is true in the same degree of the art of Rome, or Byzantium, or the Middle Ages, or the early Renaissance. In every case the things we revere and try to equal were expressive of the best that each period could produce, in thought and act and inspiration, and since this was so, the great mass of the people, falling far behind these standards, nevertheless answered to the art that revealed things higher than themselves, furnishing that appreciation and support, even the underlying impulse, that made them what they are.

During the last century while a conscious effort was being made to restore architecture (fallen with all the other arts into unexampled degeneracy) by means of schools and other organized methods of teaching, the architect has been working at a disadvantage and against great odds. The great and high things that bring art into being, furnishing not only the demand but the supply, were struggling in uneven conflict with the mean and low things that only too often were accepted and hailed as evidences of civilization and are now showing their true nature through the wide break-down of this very civilization itself, and the inconceivable war that is the means to the end. Architecture has been a fashion, and a successful one, but it was not called again into being by any deep-seated popular demand, nor vitalized by those exalted principles and impulses in religious and secular life that alone produce a united and wholesome and vigorous society. In the great sifting now in process we may hope for a radical change in all this and the emergence from the welter of carnage and savagery of new and better standards, a more consistent and honorable life.

It is then that the architect, with all those others whose duty and function it is to express in visible form the best that is in any people, will find his opportunity as never before, except at those

other great moments in the past when, as now, there has been a great readjustment and the establishing of new and better standards of comparative values: false and pernicious motives, erroneous standards, degenerate principles, will go by the board, and we may hope for that new vitality that marked the epochs that brought Greek, Roman, Byzantine, Gothic and Renaissance art into existence.

In point of fact, therefore, it is exactly now that the student of architecture is called upon to apply himself most ardently to his chosen art in the assurance that by the time he is ready to practice it, conditions will be such as to give him such an opportunity and such a backing as his immediate predecessors have lacked. And in so doing he is called upon also to take up his work with a higher motive than ever before. It is not enough that he should familiarize himself with the fashionable methods recently prevalent but no longer sufficient: he must come to know and understand the few really great styles of the past and the mighty civilizations that brought them into being, not only because of their essential greatness and enduring beauty, but also because he must use them as material out of which, and under a new inspiration, he is to build the great new art that is adequately to express the best in the great new civilization of which he is to be a part, and which, in a very true sense, he is partly to build. Architecture is not a series of disconnected styles separated by empty spaces; it is a great cumulation, an ever-growing thing that contains within itself the best that has been preserved from every time and every people from the beginning of history. No art can ever be born Minerva-like, from some contemporary Jove; its roots reach back into the infinite past and it draws its nourishment from every recorded generation. More than this, however, is the necessity of realizing how great are the powers the architect wields, and how impossible it is for him to taint his work with anything inferior or unworthy, and how wholly he must be open to every strong and fine and wholesome impulse, and to them alone. You cannot understand an art unless you appreciate the culture and civilization that lay behind it, and you cannot play your part in the economy of the time unless you look for the best, accept only the best, believe only in the best.

So, in spite of war and ruin and oncoming barbarism, there is a great opportunity opening for every man in the department. If

on the one hand we confront these evil and intolerable elements that enter into the great conflict through one agency, on the other we see new elements of honor and chivalry and self-sacrifice introduced in determined opposition thereto. From the first we can expect nothing that would build a new art, or give it reason for existing, but from the other we can gain all that is needed to guarantee an era that, by its high nobility and its regenerated spirit, can only demand, and create an art of perfect excellence—and it is this other that in the end will achieve the lasting victory.

RALPH ADAMS CRAM,
in *The Technology Monthly*.

Dr. Pender Resigns

Dr. Harold Pender, professor of electrical engineering at the Institute and director of the research division of the department of electrical engineering, resigned from the Faculty of the Institute in June to become professor in charge of the department of electrical engineering at the University of Pennsylvania.

Professor Pender came to the Institute in 1909, and until 1912 he occupied the chair of professor of theoretical and applied electricity. During parts of 1912-13 he was professor of electrical engineering, and upon the establishment of the research division of the electrical engineering department he was made director. A sketch of the life of Dr. Pender will be found on page 376 of the REVIEW for July, 1909.

He was author of the "Principles of Electrical Engineering"; was editor-in-chief of the *American Engineers Handbook*, and of a wide range of articles and papers before the engineering societies and published in the leading technical magazines in this country and abroad.

Under him as director of the research division of the department, the activities there developed very rapidly, and during the past year notable extensions of the organization for administering the work were effected.

Dr. Pender came to the Institute to succeed Professor Clifford who went to Harvard University in 1909. Professor Kennelly, formerly of Harvard University, succeeds Dr. Pender at the Institute.

WHEN WE WERE FRESHMEN

Reminiscences of serious or humorous experiences of alumni during their student days at the Institute

The Technology of my freshman days was not a very attractive place. There was just one thought, and that was, *Work*. Nobody connected with the Institute seemed to have the slightest idea that a boy needed any such thing as recreation or pleasure. Practically no opportunities were given for anything of that sort. Our time was fully occupied, and whatever amusement we got had to be in spite of the Institute, and probably against our best interests. There was absolutely no social life; no meetings of the classes to any extent; no intermingling of the students; just grind, grind, grind. We traveled from the furious smells of the laboratory to the furious smells of the mechanical department, and from those to the arduous labors of the drawing table and the physical laboratory. My class did take a brace and have an organization with a president and other officers, and also claims the credit of having organized the present Athletic Society. There was quite a little interest in athletics, but no place to play. Like Raymond Hitchcock, we were "all dressed up with no place to go." Frank Briggs and John Duff were active in athletics, and John Duff held the record, I think, for the mile walk until within very recent years. We had a gymnasium, which was used largely for drill purposes, with very meager equipment.

In the rear of it, there was a restaurant run by a darky named Jones, where we got fairly good meals for \$3.50 a week. In this respect the Institute of 1877 had some advantages over the Institute of 1914, as I fancy it would be a little difficult to get good board nowadays at \$3.50 a week. My first boarding place on Columbus avenue I paid \$8 a week for room and board, which also sounds pretty cheap in these days.

We used to congregate at the café in the Brunswick, as I suppose the boys do now, and there was a favorite German restaurant over on Dover street where we used to repair after study hours, for a modest glass of beer and a cheese sandwich. There was very little drinking, as I remember it; in fact, very little play of any kind. I never saw a football game nor a baseball game while I

was there, in which Institute men contended, although I am informed that such sports did take place occasionally. I can remember seeing men in football clothes occasionally, but they didn't seem to enter into my life at all.

The buildings at that period consisted of the present Rogers Building and the gymnasium, which was located where the present Walker Building is. Between the two there was a very low, one-story brick building in which the Mechanic Arts School had its shops. President Rogers was at the head of the Institute, and "Bob Richards," as we affectionately called him, was the bright and shining light among the professors; and quite a number of the present staff, who are now gray-haired or bald-headed men, were comparatively young fellows. Professor Lanza was in his prime; Professor Cross was active; Professor Nichols, or "Billy Rip," one of the best men the Institute ever had, was at the head of the department of chemistry; Professor Otis at the head of the department of modern languages; and old Billy Atkinson, whom we all loved, was head of the department of English. Burrison, who has just left the Institute, was even then in the drawing department.

The surroundings of the Institute were entirely different. The Art Museum stood where the Copley Plaza stands; the Public Library had not been built; and there was absolutely nothing beyond Dartmouth street but a great waste of recently filled land, crossed here and there by railroads. We used to do most of our drilling out on this waste land, and I believe whatever football or baseball was played was also played on this vacant land. If you stood on Dartmouth street where the Public Library is now, you could look clear to the hills of Roxbury without seeing a building of any kind. Nearly all the boys boarded over around Columbus avenue and the streets running into it.

A large percentage of the boys in my class came from the immediate neighborhood of Boston; a few from the other New England States, a number from the West, and one from China, Cheong Mong Cham, a mighty good fellow, who was one of the best scholars in the class, and who went back to China and became an admiral, and, I believe, was killed in the battle of the Yalu.

The classes in those days being small, the relations between the classes and the professors were quite intimate, and it was a frequent custom for the professors to entertain their classes at their homes.

In this way we were brought in pretty close touch with the men over us, and they were very much interested in the boys and glad to be helpful. I am afraid we did not always reciprocate, and that their interest in our future was not fully appreciated. I remember one professor, Osborne at the head of the department of mathematics, who always kept a team of fine horses and used to take the boys out for sleigh rides in the winter. As I didn't shine in mathematics, I never got a sleigh ride. Mrs. Stinson was at the head of the supply department of the chemical laboratory; she remained for many years afterward, and was a dear old soul, beloved by all the boys.

I went up to the Institute the other day and shinned up those four interminable flights of stairs to the top to see Professor Dewey. I could hardly help noticing the difference in the ease with which I arrived. I can fully remember running up the whole four flights with lightning rapidity, but I assure you when I got to the top, on this last occasion, I was ready to sit down. It occurred to me that this climbing of four long flights of stairs, for the elderly professors, must have been something of a tax and considerable of a burden. There ought to have been an elevator for these men many years ago. For young boys that climb was a good thing, but not so for the older men. I think they are the longest flights of stairs in the world.

The military department at that time was under the command of Lieutenant Harry Hubbell of the Fourth Artillery, a Virginian of delightful characteristics. I took an active interest in the military and rose to be a lieutenant, acting part of the time as adjutant. I also served for a time as drummer boy. Our annual visits to the forts down the harbor were greatly enjoyed. Our uniforms were of a dark blue, very simple but very neat. I remember I was very proud when I first put mine on. I always used to wear it when I went home, to make an impression on the girls. The other day I came across a picture of myself taken in this uniform, showing a very slender, pale, callow-looking youth, evidently very well satisfied with himself. Frank Briggs was captain of our company, for we had but one company in those days instead of a battalion, and we had infantry drill, artillery drill with our old field piece, which we used occasionally to let run through the door or smash through the cupboards when we wished to be particularly devilish, and, of course, we had sword drill,

bayonet exercise, etc. The Technology boys that we see on the street now, with their natty gray uniforms, look pretty well to me. A great many of the fellows in my class looked upon drill as a nuisance, and tried by every means to get out of it, why, I never could understand, as I was always interested in it and believed it to be a good thing. I am inclined to think there was something rather faulty in the makeup of the fellows, but the fact was that most of them came there with a definite purpose, and they thought time given to military drill was wasted; in fact, nearly all of them thought any kind of exercise was a waste of time.

One of the great troubles with the technical schools, like the Institute, is that the men don't take proper care of their health and do not take sufficient exercise nor get fresh air enough. I have been particularly struck of recent years in looking over the graduating classes, to see how thin and pale and anæmic they look. It ought not to be so.

I haven't drawn a very rosy picture of the Technology of 1877. I would not have anybody believe that we didn't have good times, because we did, but they had to be organized by the boys themselves and by a very small coterie. Most all of the fellows lived at home, and the little bunch living in town did get together and have an occasional jollification, but on the whole it was not a very lively place. There was an entire lack of college life and college association. The fraternities and societies which now exist and which add so much to the enjoyment of the students and to their well being, were unheard of. I rejoice, however, that this has so largely been changed; that the Institute is today a very different and much more interesting and much more attractive place, and, with the new and magnificent buildings which are being erected on the Charles, it has a future before it which is rosy indeed. All those lacks, which in the Institute of my day were so prominent, are to be cared for, and those boys who are going to the Institute during the next quarter of a century will be fortunate and happy youths.

F. W. ROLLINS, '81,

Of E. H. Rollins & Sons, Bankers, Boston.

In an interview recently given the *Boston Herald*, Prof. R. H. Richards, '68, tells of his life at the Institute at its very beginning so interestingly that we reproduce it for this department:

"From the first minute after my entering Tech I saw education and scholarship from an entirely different angle," says Professor Richards. "I quite recognize as I read literature and history now how very important are the classics. I suppose there has been a great change in the last half century in the whole method of teaching the ancient languages. I would not be understood as decrying their value. But for some cause they did not appeal to me. I seemed to insist naturally upon seeing a reason in terms of practical usefulness for the subjects to which I gave my time.

"I entered a new world when I began to listen to the lectures in which President Rogers described wonderful physical phenomena in a most beautiful way. From him also I learned the geological history of the earth. I studied mechanical drawing and machinery and descriptive geometry. All these things fascinated me. They so completely captivated my fancy that I can now say that education became instead of a lot of whys and wherefores, a delight so great that I wondered why everybody was not at school.

"In one of these Summer street rooms there were a few pieces of chemical apparatus. I recall how, as one of the seven students, I stood about the table and watched the chemical expert at his work. Only about two of the boys could get their hands on the apparatus, and every one of us was crazy over it. We had an opportunity to see things done. We were not merely listening to lectures and reading books on science. We were studying truth at the fountain.

"In the beginning at Tech we had President Rogers, Prof. William Watson, who now is the secretary of the American Academy of Arts and Sciences, who taught mechanical engineering; Professor Runkle, now dead, who had the work in mathematics; the French teacher, Professor Bocher, who later went to Harvard; Professor Krauss, who taught German, Prof. Frank H. Storer, who had chemistry, and last, but certainly not least, a certain Charles W. Eliot, who was with Tech up to 1870 and now is known as the great president of Harvard.

"I marvel yet at the wonderful faith and foresight which were shown by President Rogers when he had but seven pupils. They tell me wherever I go now that the Tech is surpassed by no school of the kind in the world. While still we were just seven in number, the piles were being driven for the Rogers Building in Boylston street. It was inspiring to come into contact with that man. He had acquired the site for the Rogers Building before the school

was opened, and he was so sure of himself that he won the citizens of Boston and got them to give the money for the plant."

Sitting opposite this most charming old gentleman in his study in his Jamaica Plain residence, it is rather difficult to realize that he was in at the very beginning of modern scientific instruction in this country, and you keep putting questions at him about those days. Ask about the first Tech commencement, and the quiet smile that flickers about the corners of his mouth indicates to the expectant interviewer that there is another good story coming. Here is the yarn as he told it:

"President Rogers had been connected with various institutions which may be considered to represent, perhaps, the old pattern. He had been with William and Mary and later with the University of Virginia, and he did a lot of work in geology in that state during his summer vacations. When he made up his mind to start a modern engineering school, he decided that it must be different from all schools of the prevailing type. He held that the academic faculties were so wedded to the older methods and ideas that under their control a modern scientific school could not be developed. This feeling was brought to light at Tech in many little ways. It may be that his prejudice was so strong that he rather leaned backward.

"So, in his efforts to avoid imitation of current models, he said: 'We will not have any commencement exercises. There shall be no flourish of oratory and floral displays shall be missing. We will have no debates, with men set to defend themes in which they may or may not believe.' As a result, we of the original seven never graduated—in the common sense of the term. My diploma simply stated that I was a graduate of the M. I. T. We were all proud of that diploma, however.

"We did have to submit a thesis before the diploma was awarded to us. And that thesis was prepared after the course had been completed. Some fine men in those early days never bothered to write a thesis and as a result they never had a Tech diploma. One of these men was William Jackson, long the city engineer of Boston. As for my own thesis:

"I finished my work in June, 1868. Then I went up to the Calumet & Hecla mine to spend the summer assaying copper for Mr. Agassiz. In the fall I handed in a thesis on that mine and got my diploma. To be sure these theses did not compare with the papers that have to be submitted nowadays.

"As a matter of fact, as a curiosity, I have had that thesis of mine bound up and deposited in the library of the school.

"I suppose that Mr. Rogers carried his theories a little too far in his commencement rulings. People began to wonder and question, 'Isn't the Tech able to qualify men to receive degrees?' I have now a B. S. which I worked hard to get and you know what the present practice is as to degrees and commencement exercises."

Most of my friends in Chicago started for Yale College in the fall of 1883 and naturally I felt as though I wanted to go too; but that year an epidemic of typhoid fever broke out in New Haven and my mother would not let me go there. My father suggested Harvard, but I didn't care for that and so was undecided whether to go to any college or enter business. John Shortall had just come back from St. Paul's School and was going to Technology to study architecture and suggested I go there. It didn't make much difference to me where I went as long as I couldn't go to Yale, so I hiked downtown, where they were holding preliminary examinations for Tech, and I got through somehow, the Lord knows how. I had never studied French so I had to take that examination in Boston later.

I went into Rogers' Building (Walker Building was hardly completed), and met Wallace Bowles and Guy Kirkham of Springfield, Mass.,—the latter a friend of John Shortall from St. Paul's School. John Shortall's father had come on to Boston with us and placed us at Miss MacIntosh's, 21 St. James avenue, where we had a big room with two beds. I remember we three went to the Boston Theatre and saw Henry Irving in *The Bells*.

I think it was either freshman year, perhaps later, when we also saw Richard Mansfield as "Poohbah" in the *Mikado*, which very few of the living generation would really believe. Our favorite actress was Marie Jansen, who died a few months ago, and her song—"

"I've songs for singers of all ages,
I've songs that only love unfold;
I've songs that overflow with passion,
For modest swains and lovers bold.
In noble halls of fashion surely
None with me will chance to meet,
My throne is one I hold securely
My happy kingdom is the street."

And her little dance that followed and her beautiful dark eyes looking down from the stage would make every '87 man go home crazy and vow the next day it was he she was flirting with.

It was '87 who pretty nearly put the Grand Opera company with Adelina Patti as chief star on the "bum," by raising the dickens (and this is hardly a big enough word for what we did) on the stage one night. We appeared in a love scene ten minutes before we were due and kicked an old helmet, that belonged to one of the soldiers, around the stage with horrible yells behind the scenes, and then nearly killed Henry E. Abbey the Impressario for being too "sassy." I know Tim Sprague went down to supe the next night and when asked if he had ever been on a stage before in his life replied promptly, "Why yes, I was on last night." "Then by (Heck)," said the doorkeeper, "you don't get in to-night." '87 has supported all the famous divas—Patti, Scalchi, Nevada, Christine Nilsson, and a lot of famous men; also Excelsior and Black Crook of Kiralfy fame.

The "Old Elm" was our favorite rendezvous and Billy Park's musty ale our favorite beverage. It was here we celebrated our particular victory at baseball against Brown College (5 to 2), and our many other victories(?)

We started football going again after it had lapsed into a state of innocuous desuetude and got up a league, Williams, Amherst, Dartmouth, Tufts and Technology belonging. We started a glee club and banjo club. We started a baseball club. We started tennis courts between Rogers' and Walker Buildings. We started the *Technique*.

We never finished anything that I can remember except '86 in the tug-of-war where our team had to train in the Turkish bath and go without meals to get down to required weight at time of "weighing-in" (12 o'clock noon), and were twenty-five pounds overweight when they pulled at 2 p. m. We won the class championship that year and gave the team a big blowout at \$2 per plate at Young's. We all went to Boylston Museum on Friday night—the amateurs' night. The place has remained closed ever since.

'87 had a bully crowd of fellows although they don't stand as high on the list as '88 on the New Technology fund. They were a live class out of school hours and the Faculty and professors all liked them, for the class always gave them something to do and something to think about. I remember when we went there they said Webster Wells used to learn the time tables of all the railroads

running in and out of Boston. He gave this practice up the year after we got there. If an '87 man didn't have his mechanical drawing up, Burrison used to take it home and do it for him. Luquien used to let a football player go scot free if he didn't know his French. Nichols always said we were much brainier than '86. We had Jimmy Munroe hypnotized and so all along the line playing both ends from the middle.

I could write much longer on this theme but Litchfield wrote John Shortall to send this letter in and John sent me the request a week later. I never got anything in a paper or magazine yet except *The Tech* and I was an editor of that, so the readers of the TECHNOLOGY REVIEW may never read this, but I am going to send it anyway.

SOLOMON STURGES, '87,

Doing Nothing—Since the War.

Twenty-four years after, entitles '94, no doubt, to look backward, but it is still a surprise to be asked to enter the reminiscent state.

The freshmen days remain vivid, but of course we were very impressionable.

The need of organization was forced upon us by the sudden realization that '93, for no apparent cause, was our deadly enemy, even trying to elect our class officers, and we accordingly rallied about the tallest man among us whom we knew to be a freshman. It was a great relief to find at the cane rush, which in those days was still in vogue, and in interest literally outstripped the football game, that '92, a class with a most wonderful and compelling yell, was our friend, encouraging us to fight our shirts off.

And so, aided by "Tommy Pope" and his "Assistant" in chemistry at the Walker Building, "Linus Faunce" in mechanical drawing at the top of Rogers', and good old General Moore in the little Gymnasium Drill Hall down from Exeter street, and, of course, Rogers' steps, we came to know each other and to form the friendships that have stood by us.

I think that we were really put on our feet by a little talk by President Walker in the hall in Rogers' where we had been trying to learn our future from the cabalistic drawings about the wall of the room. He made us feel at home but told us the need of keeping up with each day's work just as any hardworking successful business man must do.

Technology he said, was a place for men to work, not for boys to play; true friendships were formed by men doing good work side by

side; athletics and class interests were not to be neglected, but were subordinate; his door was open to each of us to talk with him of our problems.

Surely this was a fine beginning and very comforting in the days when "Tabular Views" perplexed us and '93 was a thorn in the flesh.

At that time a freshman function was the "Semi-Annual Drill and Dance," held in an old skating rink, Winslow's, I believe, near the site where the engineering buildings were subsequently erected; and '93 conceived the dazzling feat of releasing a pig in the midst of the dress parade much to the indignation of the general who scampered about the hall after him; of lowering a bale of hay for the freshmen and of scattering red pepper for the edification of the sisters and sweethearts. Needless to say the semi-annual drill was forthwith abolished before '94 could execute a more diabolical plot against '95. As to '93, however, scores were evened when John Calvin Locke with a pair of steel climbers, removed the orange and black flag from the pole at the South End grounds and raised the blue and gray, and '94 not only defended successfully the manoeuvre, but won out in the game and marched homeward behind a band singing "Ta-ra-ra-boom-de-ay," making zig-zag tracks in column of eight down Boylston street.

Another vivid memory is the course in "Political History since 1815" to the entire class in the hall of Rogers' by Charles H. Levermore. A man of strong personality and executive force and ability, he seemed to us the embodiment of all that governors, presidents and rulers should be, and we scribbled for dear life in our combination note and text-book, quite assured that otherwise the "F F" would come our way. And often I have thought of him and his predictions with his big voice filling the hall, standing there pointing to the maps of Japan and Corea, South Africa and the Balkans and how truly he was justified by what has come to pass.

I think, though, that a good half of the benefit of Tech was not in the information given, nor even in the training in doing things, but the personal influence of the professors, the appreciation of their earnestness and ability and fine qualities. Professor Van Dael, whom we affectionately called "Fan Tail," gave to us the charm of the literature of France and Professor Carpenter brought to us the refinement of English literature—not to mention the interesting personality and virtues of other professors, many of

whom came after the freshman year when, as then required, we chose our special "course."

Professor Carpenter, I remember once joined me walking across the Common on my way to North Station—or rather the Boston and Maine, as the North Station was not thought of—and asked me to his rooms on Beacon Hill where he talked with me of books and college life and made me his warm admirer.

And who of us can forget the personal equation of Professor Runkle! We did not reach him till the sophomore year in analytical geometry, but some one should record his fatherly interest in us and particularly his delightful way, a day or two before a "test," of saying, with his forefinger on his nose:

"In the Old Farmer's Almanac you read 'Look out for rain about this time.'"

WILLIAM H. KING, '94,

Assistant Corporation Counsel, City of New York.

Professors from Harvard

In accordance with the agreements for coöperation between the Harvard Engineering School and Massachusetts Institute of Technology, fifteen members of the Harvard faculty have become attached to the staff at the Institute. The following men have entered the mining department: Henry L. Smyth, professor of mining and metallurgy; Edward D. Peters, Gordon McKay professor of metallurgy; Albert Sauveur, professor of metallurgy and metallography; George S. Raymer, assistant professor of mining; Charles H. White, assistant professor of mining and metallurgy, and Louis C. Grafton, professor of mining geology.

In the mechanical engineering department are Lionel S. Marks professor of mechanical engineering, and Arthur E. Norton, assistant professor of engineering drawing. The head of the civil engineering department will be George F. Swain, Gordon McKay, professor of civil engineering. Associated with Professor Swain will be Lewis J. Johnson and Hector J. Hughes, acting as professors of civil engineering, and George C. Whipple, Gordon McKay professor of sanitary engineering, all of the Harvard faculty.

To the department of electrical engineering have been added Arthur E. Kennelly, professor of electrical engineering; Harry E. Clifford, Gordon McKay professor of electrical engineering, and Comfort A. Adams, professor of electrical engineering.

Professors Swain, Whipple, Sauveur and Clifford are graduates of the Institute.

New Register of Former Students

As soon as the necessary information can be collected a new edition of the *Register of Former Students* will be published. This will include an alphabetical register of students that have ever attended the Institute, including those enrolled in the School of Mechanic Arts; a class register and a geographical register.

The alphabetical register will contain the following information in regard to former students: full name, with an indication by the use of parentheses, of the usual form of signature; academic degrees, course pursued at the Institute; year of graduation (or in the case of non-graduates, the years of attendance); class affiliation in social matters; occupation and business address. The class register and the geographical register will give the name, initials, course and class.

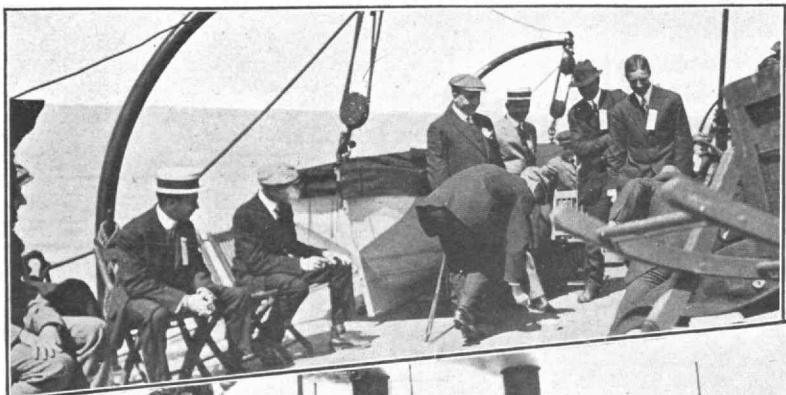
Cards are being sent out asking for complete and accurate information by return mail, in order that work on the *Register* may proceed at once. If prompt replies are received, the *Register* can be published the early part of the year.

Technology and Industrial Efficiency

At the time of the Congress of Technology, the McGraw-Hill Book Company came to the assistance of the Institute and took entire charge of the publication of the papers read upon that occasion, which made a book of nearly five hundred pages. These papers were of a most interesting and instructive character, many of them having value as matters of reference. We are informed that there are a number of these volumes remaining in the hands of the publishers.

It is a matter that concerns us because of our obligation to the McGraw-Hill Book Company. We are therefore publishing this notice so that our readers who desire the book may write directly to the publishers (239 West 39th Street, New York), who will send them, upon receipt of three dollars, the book, "Technology and Industrial Efficiency."

The contents of the book are divided into the following departments: Section A, Scientific Investigation and Control of Industrial Processes; Section B, Technological Education in its Relations to Industrial Development; Section C, Administration and Management; Section D, Recent Industrial Development; Section E, Public Health and Sanitation; Section F, Architecture.



THE CLEVELAND DELEGATION AT THE PUT-IN-BAY OUTING

DOINGS IN ALUMNI CENTERS

Summer entertainments and plans for the coming season—New Technology Club organized in Montana—Tech spirit strong all over the country

TECHNOLOGY CLUB OF NORTHERN OHIO.—The snapshots tell the story, and those who went to Put-in-Bay on June 20, for a friendly ball game with the Detroit fellows, certainly maintained our Northern Ohio Clubs' reputation by getting out of the day's trip all the good time there was to be had.

In spite of the early hour of starting, 7.30 a. m., central time, and a cold disagreeable "day before" that didn't look as though the weather man was going to favor us, we had a jolly good crowd of over thirty when the good ship *State-of-Ohio* pulled out of her berth, a rousing Tech yell speeding us on our voyage. The party included several wives, families, and "friends" who contributed much to the enjoyment of the outing. A strong delegation had been expected from Akron and all but six or seven of them evidently turned in the night before deciding 'twas too early to get up in the morning, and 'twould be a bad day anyway! However, Mr. and Mrs. A. L. Patrick, '94 and son of Elyria thought it was well worth while getting up at four o'clock in the morning to get into Cleveland in time to catch the boat.

The sail over was just one good thing after another. The weather was perfect for a lake sail, the steamer fresh from its spring overhauling, and being so early in the season, we had it practically to ourselves. After getting acquainted and watching the lake shore for awhile (Fig. 2 shows the crowd stretched along the upper deck) we ran off the deck sports that Don Stevens, '11, had arranged, and unfortunately couldn't be with us to referee himself, including peanut races, needle-threading and necktie-tying contests, etc., for both the men and ladies. Fig. 1 shows Ted Carlisle, '10, and Charlie Haynes, '04, giving their less nimble opponents in the peanut race the "merry Ha-Ha!" However, we removed any possible cause for ill-feeling, assaults on the judges, etc., by donating all prizes to the children.

A group picture was next in order and then we gathered 'round Charlie for some of the good old Tech songs, after which we lunched, picnic-style, in congenial groups and talked of the new Technology on the Charles, which would be in such decided contrast to "our years at Tech"; of our work, of business conditions, etc., all the while feasting our eyes on the beautiful islands off Sandusky as we approached our destination. We arrived at Put-in-Bay and safely disembarked; had a few minutes to ramble before the Detroit alumni bore down upon us with their lady friends and Boy Scout band. As there was some delay in finding the mayor and getting the use of his ball park we had time to rub elbows with our Detroit friends and to "do the boardwalk." Then we had some real American league ball, with Arch Eicher, '12, behind the bat for Cleveland, to handle Charlie Haynes', '04, bewildering assortment of curves, drops, fast and slow ones. Unfortunately nobody could be found who was willing to keep score, but Cleveland's superiority was evident throughout the game. After the game, pictures of the group were taken by Max Hellman, '98, of Cleveland, Detroit's official photographer's camera having turned out to be a lunch box, and as Ned Rowe, '06, had secured several good pictures of the Cleveland delegation on the sail over, Mr. Hellman very kindly allowed Detroit to pose as the whole crowd. (See page 443 of the July REVIEW.)

With the time we could spend together on the island far too short, the Detroit crowd, led by their band, escorted us to the wharf and after a mutual exchange of hearty Tech cheers, and challenges for a "return game" some time, our *State-of-Ohio* started her walking-beam for home. The trip back was uneventful, everybody enjoying himself as suited his fancy. Hailing from such a live city as Cleveland, our steamer had a tango deck of course with a dance orchestra, where Arch Eicher and Miss Howlett exhibited many of the modern dances. Arriving at our dock in the early evening we parted, with good wishes for the coming summer and with hopes for other similar outings now and then in the future. The general arrangements for the Field Day were in charge of E. B. Rowe, '06, with C. R. Haynes, '04, and D. R. Stevens, '11, looking out for the sports.

Those who made the trip from Cleveland are as follows: Potter, '00, Mitchell, '12, Sherman, '04, Haynes, '04, Miss Coburn, Sheridan, '95, Hellman, '96, Reed' 13, Dunlap, '11, Ferris, '08, Gould,

'10, Alexander, '11, Mr. and Mrs. A. L. Patrick, '94, and son, Mr. and Mrs. Fred Metcalf, '90, Duyser, Eicher, E. B. Rowe, '06, Miss A. M. Howlett of West Newton, Dr. J. W. Brown and family, C. W. Brown, '99 and party, Mabbott, '12, Carlisle, '10, and Motch, '99.

On Saturday, November 7, the members of the club will attend in a body the football game between the Case School of Applied Science and Kenyon College. The game will be followed by an informal supper at the Athletic Club when the new officers will be inaugurated with due pomp and ceremony.

Meetings of our club are always enlivened by unexpected happenings. After dinner the long-heralded bowling match between Akron and Cleveland will be played off.

Nominations for officers to be elected at this meeting are as follows: president, P. W. Litchfield, '96, factory manager, Good-year Tire and Rubber Company, Akron; vice-president, Frederick Metcalf, '90, Chase Machine Company, Cleveland; secretary-treasurer, Don Stevens, '11, Peerless Motor Car Company, Cleveland; directors, F. A. Smythe, '89, G. E. Merryweather, '96, A. T. Hopkins, '97, E. R. Hall, '08, H. B. Dates, '94, T. W. Carlyle, '10, G. T. Glover, '08, A. D. Hatfield, '96, G. W. Sherman, '94, A. A. Gould, '10.—*D. R. Stevens, '11, Secretary, care Peerless Motor Car Co., Cleveland, Ohio.*

TECHNOLOGY CLUB OF MONTANA.—On Saturday evening, July 19, the men named below met at the Silver Bow Club in Butte, with Dr. Richards, '68, and, in addition to having an excellent dinner and a generally good time, heard from Dr. Richards an interesting statement of the progress with the New Tech and of the Tech-Harvard alliance. Besides this there was organized the Technology Club of Montana with the following officers: President, Charles W. Goodale, '75; vice-president, Ralph Hayden, '06; secretary-treasurer, C. D. Demond, '93.

Those present were: Robert H. Richards, '68, Boston; Charles W. Goodale, '75, Butte; C. D. Demond, '93, Warren Jenney, '94, Anaconda; Lloyd T. Buell, '05, Butte; Ralph Hayden, '06, John A. Root, '06, F. C. Jaccard, '07, Albert E. Wiggin, '07, Anaconda; N. S. Hammond, '08, Rudolph Emmel, '11, J. A. Brophy, '16, Butte.—*C. D. Demond, '93, Secretary-Treasurer, 704 Main Street, Anaconda, Mont.*

NORTHWESTERN ASSOCIATION OF THE M. I. T.—The annual summer outing of the Northwestern Association was held Friday, August 7, at the Midlothian Golf Club. We had a good sized attendance and a very enjoyable time.

The kodak pictures taken by C. W. PenDell, '98 will serve to indicate the character of the activities. The Model Farm visited during the afternoon proved to be a model indeed; and the farm dinner at the club house was supplied almost exclusively from the Model Farm and from the club grounds.

The rival baseball teams, Odd Classes *v.* Even, were equipped with the hats, paper curls and false noses shown in one or two of the prints, the rival teams in action presenting a very peculiar spectacle. As the score at the end of five innings was a tie, we feel safe in stating that there is no particular advantage in delaying entering Tech for the purpose of graduating either with an odd or an even class.

The putting contest developed considerable interest, particularly among the less strenuously inclined; and the straight game of golf occupied the attention of many others from early morning until late night.

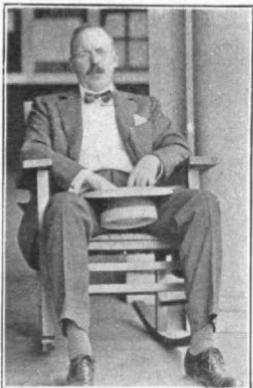
Altogether, the day was a great success, and enthusiastic appreciation of it was accorded to our host, F. W. Clark, '80, in the form of a long Tech cheer.—*George B. Jones, '05, Secretary, 1444 Monadnock Building, Chicago, Ill.*

INTERMOUNTAIN TECHNOLOGY ASSOCIATION.—An informal gathering of the Intermountain Technology Association was held at the Hotel Utah Friday evening, July 10, 1914, at six o'clock. Some eight men sat down to a very pleasant dinner.

Following the dinner, a short business meeting was held, at which the following officers were elected for the ensuing year: C. S. MacDonald, '99, president; G. S. Humphrey, '10, first vice-president; V. S. Rood, '07, second vice-president; Owen H. Gray, '97, secretary-treasurer.

Following the short business meeting, the men present gathered about the piano and sang some of the old time favorite songs. The singing was concluded with a "We are happy" and "M. I. T." cheer.

Those present were: John C. Damon, '05, G. S. Humphrey, '10, V. S. Rood, '07, Owen H. Gray, '97, C. S. Macdonald, '99, V. W. Mendenhall, '02, Gregory M. Dexter, '08, and Harold Burton.



SUMMER OUTING OF NORTHWESTERN ASSOCIATION

1. "Mon" Sturges, '87, in action. 2. Our Host, F. W. Clark, '80, at end of drive (note caddies behind the trees). 3. The Rival Baseball Teams. 4. Deacon Dick Schmidt, '87, County Architect, viewing the conflict. 5. Charles E. Lord, '98, Patent Counsel for the International Harvester Trust. (About to undergo dissolution.)

It was evident from the spirit of the men gathered that a very enjoyable evening had been spent. The only regret is that so few Tech men are in the vicinity of Salt Lake City. The local association does not have much over a membership of twenty-five and this, of course, handicaps the expression of Technology enthusiasm.

—*Gregory M. Dexter, '08, Salt Lake City, Utah.*

INDIANA ASSOCIATION, M. I. T.—The Indiana Association' M. I. T., resumed monthly luncheons at the University Club, after a three months' recess, the next meeting occurring on the 15th, at which time we will make an inspection visit to the plant of the Semet-Solvay works as guests of H. M. Chapman, '02, one of our members.

These little trips after lunch are very interesting and occupy but part of the afternoon.

It is the intention to make several more this winter, one to the new plant of the Eli Lilly Company, manufacturing chemists, as guests of Burrage, '92, and Rickards, '99, will soon follow.

The annual meeting will be held in December or January and we look for many men over the state to be present, our luncheons being attended almost entirely by Indianapolis men.—*W. B. Parker, '88, Secretary, 805 Board of Trade Building, Indianapolis, Ind.*

TECHNOLOGY CLUB OF NEW HAMPSHIRE.—Undaunted by unfavorable weather indications, a large delegation from the Tech Club of New Hampshire attacked and invaded Three Rivers Farm, Dover, N. H., Sunday, June 28, 1914, for the fourth summer outing as the guests of their president, E. W. Rollins, '71.

“It's a long way to Three Rivers Farm;
It's a long way to go;
It's a long way to Three Rivers Farm,
For the swellest time you know.
Goodby Pres. Rollins, Farewell Ladies fair,
It's a long way to Three Rivers Farm
When you are leaving there.”

Tune (It's a long way to Tipperary).

Three Rivers Farm is a gem in a setting of pines and green lawns and semi-circled by three sparkling rivers. There is something essentially beautiful and harmonious in this setting for the splendid

mansion of our host which puts one at peace with his fellow men. It was here that autos from capitals and manufacturing centers discharged cargoes of engineers and capitalists who were rounded up at the buffet where a test for "load factor" was made to the satisfaction of all delegates. At this point all thought of unpleasant weather was forgotten and the men felt they preferred one day at Three Rivers Farm to eternity in Paradise.

The morning was made enjoyable by a musical entertainment and the swapping of experiences by the men, and time passed quickly until luncheon was announced. By force of circumstances the collation was spread in a capacious barn instead of the grove, which would have been used under sunny skies. Following the dinner the company was entertained by a number of speakers: I. W. Litchfield, '85, field manager of the Alumni Association, related the latest gossip of the Institute and bore the regrets of President Maclaurin and Jasper Whiting, '89, president of the Alumni Association. John Ritchie, Jr., publicity manager of Tech, followed with a talk outlining the progress on the new buildings. N. S. Bean, '94, vice-president, Tech Club of New Hampshire, Montgomery Rollins, '89, and Prof. O'Kane of the New Hampshire Agricultural College also made short addresses. For the final exercise at the table, George B. Lauder, '89, of Concord, N. H., in a speech scintillating with witticisms presented to the host, President Rollins, on behalf of the Tech Club of New Hampshire, a magnificent loving cup of silver.

We New Hampshire Tech men are immensely proud of our president and host and were here made to realize the genuineness and humanity of the man. Everybody felt his good cheer for he laughs and jokes and keeps his soul alive by associating with every body. Nothing is so small or unimportant in the way of actual life that it does not secure his sympathy. He is one of Tech's oldest graduates but is the most active man I ever saw. He can do the maxixe and tango with the best of 'em. In fact the secretary stole away from the party long enough to witness him in the maze of the one-step, with one of the attractive young lady visitors. His recipe for happiness is: Work; play; study; laugh; love; mix. He made good on this recipe early in life and I can attest for its success to date.

List of Technology alumni at Three Rivers Farm.—From Boston: I. W. Litchfield, '85, field manager alumni Association; Charles



E. W. ROLLINS, '71

President of the Technology Club of New Hampshire and annual host at the
great clam-bake

H. Bartlett, '85; Paul W. Goldthwait, '05; Charles E. Locke, '89; John Ritchie, Jr., publicity manager of Technology.—From Concord, N. H.: Carl A. Hall, '08; Omar S. Swenson, '03; Robert E. Dillon, '10; George A. Swenson, '13; Leigh S. Hall, '14; George B. Lauder, '89.—From Rye, N. H.: H. Russell Sawyer, '89.—From Dover, N. H.: E. W. Rollins, '71; Montgomery Rollins, '89; Shirley S. Philbrick, '98; Wm. A. Grover, '97; N. E. Seavey, '99.—From Manchester, N. H.: George M. Belcher, '08; Samuel P. Hunt, '95; Miles Sampson, '08; J. L. Arnott, '75; H. E. Thompson, '04; W. D. Davol, '06, secretary of the New Hampshire association; Harold R. Perry, '10; Edmund Lee Warren, '08; Harold A. Smith, '11; A. O. Roberts, '04; N. S. Bean, '94; G. Arthur Brown '11; L. A. Thompson, '05; S. L. Flanders, '74.—From Merrimack, N. H.: Harrison L. Clough, '10; Philip L. Caldwell, '11; George M. Belcher, '08.—Hostess and receiving ladies: Mrs. Ashton Rollins, Mrs. Omar S. Swenson, Concord; Mrs. Henry Harley, Fall River; Miss Elizabeth Young, Denver; Miss Dorothy Harrison, Petersburg, Va.—Invited guests: George J. Foster, Dover; Irving Southwell, Dover; Dwight Hall, Dover; D. Towle; Wingate Rollins; George R. Smith and W. C. O'Kane of Durham College.—*W. D. Davol, '06, Secretary-Treasurer, 819 Elm Street, Manchester, N. H.*

TECHNOLOGY CLUB OF RHODE ISLAND.—The first meeting of the Executive Committee of the Technology Club of Rhode Island was held at the University Club on Thursday evening, October first, 1914, with W. C. Dart, '91, Z. W. Bliss, '89, E. D. Pingree, '96, and the secretary in attendance, A. E. Hill, '83, being unavoidably absent.

Prof. E. B. Homer, '85, was unanimously reelected as the representative of the club on the Alumni Council, and the secretary was instructed to notify him to this effect.

The membership list was carefully examined and the secretary was directed to send notices to all members on the list who had not paid their dues for the present year.

The work of the club for the coming season was discussed and the sentiment of the committee was in favor of monthly gatherings with light refreshments instead of a dinner, with the expectation of getting a larger attendance of the younger members on account of the lower cost of each function. The matter of securing speakers on topics of a general interest for these gatherings was also considered.

Governor Bliss volunteered to look up a suitable hall for the use of the club during the coming season, and after a general discussion the committee adjourned.—*Clarence L. Hussey, '08, Secretary, Fruit Hill, 1547 Smith Street, Providence, R. I.*

THE TECHNOLOGY CLUB OF THE UNIVERSITY OF ILLINOIS.—The club has recently elected new officers as follows: President, Edward W. Washburn, '05; secretary, Harold E. Babbitt, '11; treasurer, Angelo B. M. Corrubia, '13—*Harold E. Babbitt, '11, Secretary, 806 West California Street, Urbana, Ill.*

DAYTON TECHNOLOGY CLUB.—The Dayton Technology Association has continued its Friday noon luncheons during the summer and in addition its members and their families took part in an outing on August 14 at Killkare Park, a short distance from the city.

Heathman, '98, Gibbons, '06, and Spiehler, '08, had charge of the arrangements and demonstrated the fact that good judgment and efficiency were included in their Technology training. We had a good time, thanks to their efforts, and have already begun to plan for an outdoor family party next year.

Wuichet, '89, and family; A. W. French, '89, of Piqua; Kramer, '98, and family; Gerber, '07, and wife; Spiehler, '08, and wife; Putnam, '08; Heathman, '98, and family; E. M. DeWitt, '12; Chandler, '12, and wife; Wells, '92, and family were among those present. There were races and games for the children in which the men joined; a good dinner was served in the open, and the late afternoon and evening were spent in getting acquainted and relating experiences.

Waite, '90, our city manager, and Barlow, '05, his able assistant, were too busy coaxing Dayton's outgrown waterworks to yield a few extra drops to join us. We expect them to have the city running like a new sewing machine by next August, and we shall then see if they can run foot races as well as they can manage a city.—*Edward C. Wells, '92, Secretary, Platt Iron Works, Dayton, Ohio.*

THE TECHNOLOGY CLUB OF BRIDGEPORT.—The Technology Club of Bridgeport, Conn., which was formed in April, starts in a flourishing condition; it has adopted a constitution, and has laid out a program for the remainder of the year.

The opening dinner was held on Tuesday night, October 20, at the University Club; on November 18, a Technology smoker will

be given, and another smoker is scheduled for December 16. This indicates that the club is alive and intends to keep up interest in Technology affairs among the alumni in this part of Connecticut.

The officers of the association are: F. C. Blanchard, '91, president; Wilbur A. Swain, '15, secretary; Halsey R. Philbrick, '06, treasurer. The committee on proceedings, elected at the meeting of April 17, consisted of W. A. Swain, '15, P. W. Dalrymple, '12, and Edward G. Gallagher, '00.

An interesting feature of the Bridgeport club is that all those present, except two, were graduated during the present century.—*W. A. Swain, '15, Secretary, Criterion Club, Bridgeport, Conn.*

TECHNOLOGY CLUB OF THE CONNECTICUT VALLEY.—The 1914 meeting was as pleasant and successful as those of former years. Part of the crowd left Hartford on the boat Friday, June 26, and the usual good dinner and jolly time filled the hours from Hartford to Saybrook, where they were met by the launch from the Hartford Yacht Club.

Saturday morning the stragglers began to arrive and by the time the ball game started there were seventeen present. The game was close and very exciting, and gave every one a fine appetite. After a swim we were ready for the dinner and about twenty-five sat down.

The officers elected for the following year were: E. P. Marsh, '89, president, and E. W. Pelton, '03, secretary and treasurer. Everyone enjoyed renewing the old friendships and forming new ones.—*E. W. Pelton, '03, Secretary, 77 Forest Street, New Britain, Conn.*

The third annual convention of the Technology Clubs Associated in Pittsburg early next year promises to be a meeting of unusual attractiveness. The date will be announced in our next issue. There will be special cars from New York and Boston.

TECH MEN IN THE PUBLIC EYE

GRANDVILLE R. JONES, '07, has been appointed to the faculty of civil engineering with the new Engineering Department of the Johns Hopkins University. Professor Jones has had practical experience with the Pennsylvania Railroad, and the Mt. Vernon Bridge Company of Ohio. For five years he was employed at the Filtration Plant, Washington, D. C., during the last three years of which he was assistant superintendent. In 1912 he became professor of sanitary engineering at the University of Kansas, and was also engineer for the Kansas State Board of Health. In his new work he will devote his energies to hydraulic, sanitary and water supply engineering.

THOMAS G. CHAPMAN, '09, has recently been appointed assistant professor of metallurgy and ore dressing at the Michigan School of Mines.

A. S. ACKERMAN, '03, former senior assistant engineer of the Cape Cod Construction Company, builders of the Cape Cod Canal, has been promoted to the position of resident engineer.

ROLAND P. DAVIS, '06, professor of structural and hydraulic engineering, West Virginia University, has recently been appointed bridge engineer for the Road Bureau of the State of West Virginia. Mr. Davis has recently completed, as joint author with Professor H. S. Jacoby of Cornell University, a book on foundations.

FRANCIS C. LINCOLN, '00, formerly associate professor of mining engineering at the University of Illinois, has recently been appointed head of the Mackay School of Mines of the University of Nevada, Reno, Nev.

R. H. DANFORTH, '98, formerly professor of mechanical engineering at Annapolis, has been made professor of mechanics and hydraulics at the Case School of Applied Science, Cleveland, Ohio.

GEORGE W. FULLER, '90, GEORGE C. WHIPPLE, '89, EARLE B. PHELPS, '99, constitute the International Joint Commission, representing the United States, which is determining the extent and causes of the pollution of the boundary waters between the United States and Canada.

MISCELLANEOUS CLIPPINGS

Young men in their student years are plagued by a supposed conflict between theory and practice. It is the thorn under the rose petals of Professor Cram the academic years; students are uneasy under all this instruction as to theory, wondering mightily, meanwhile, how much of it will apply. This uneasiness, in the final years of an academic course, is partly youth's champing of the bit in impatience to join the race, and partly a property of the inborn modern instinct to insist that instruction shall be practical in the end—let it be as theoretical as it pleases with that end in view. Thus we have had, in our colleges, and, of course, even more in our technical schools, a drawing together into closer relations of the practitioner and the teacher. "He who can" not only "does"; "he who can" now also "teaches."

Such an instructor Technology secures in its new senior professor of architecture, Mr. Ralph Adams Cram. His teaching will bring him into intimate instructional relations with the students, and theirs will be the uncommon fortune of association with a master who stands at the head of his profession in America today, and whose ecclesiastical and academic buildings grace many a landscape in our own country and in Canada as well. The much desired practical contact of the school with the outside world is one of many benefits afforded by his appointment. Fortunately for American architecture, Mr. Cram will not interrupt the active practice of his profession, and he will, to the class room, bring a long and intimate experience of the relations of architect to client which should be invaluable to beginners in a profession which demands often as great skill in dealing with complicated human elements as with problems in the art of design.

All this is a value to the institution enhanced by the circumstance of Mr. Cram's having been concerned over the education of our younger men in architecture. He has served as chairman of the committee from the American Institute of Architects which has to do with this point—the very vital one of determining ideals and the manner whereby they are to be sought. In architecture as in few other mediums of the arts poor taste and inexpert hands declare themselves with a deadly accuracy. These two foes of public beauty have an able adversary in Mr. Cram whose armament against them has been increased by an appointment which is equally a matter of congratulation to Technology.—*Boston Transcript*.

President MacLaurin of the Massachusetts Institute of Technology announces the resignation of Prof. James Knox Taylor of the department of architecture. Professor Taylor's resignation has been made the occasion of a change of the organization as well as of the personnel of the department. Professor Taylor's place as senior professor of architecture has been filled by the appointment of the distinguished architect, Ralph Adams Cram. Mr. Cram will continue the active practice of his profession, and his presence in so important a position on the Faculty will ensure that the school is kept in close touch with the problems of the day and the needs of the profession. Prof. William H. Lawrence, a graduate of the Institute who has for many years been professor of architectural engineering in the department, will assume the position of chairman of the department of architecture and will be responsible for the administrative routine.

The majority of the instructing staff in the Institute's department of architecture have graduated from the École des Beaux Arts or from the Institute itself, which has carried on the best traditions of the famous French school with such modifications as were necessary to meet the needs of this country. Mr. Cram's appointment will enable the students of architecture to see some of their problems from a somewhat different point of view. Many years ago Mr. Cram was credited with a critical attitude towards the methods of the French school. During the last ten years he has devoted a great deal of attention to the problem of the education of the architect, having served for some time as chairman of the Committee on Education of the American Institute of Architects. His investigations have brought him more and more into harmony with the educational system of the Beaux Arts, leaving him, however, sufficiently alive to its possible defects to safeguard him from following its traditions blindly.

The fact that he has accepted the appointment at Technology is evidence of itself of his appreciation of the school, but in answer to a direct question in the matter Mr. Cram said that the Institute is a school that has produced results second to none in the United States. It is the oldest and most distinguished and is in better condition to maintain its product of the highest quality than almost any other one in the country. Of all the institutions that do not require an academic degree there is the greatest confidence in Technology. The Institute has a fine record and the best chance of developing into an ideal school of architecture in the United States.—*The Western Architect.*

The limitations and inefficiency of the health office of the small community are recognized by public health workers and this probably constitutes one of the greatest single obstacles to the general advancement of the public health movement. The strategic importance of the local health office in the warfare on disease must be obvious. With an inefficient administration at this

point the citizens are at all times exposed to the danger of attack and are deprived of that protection which modern sanitary science is enabled to throw about them. So far as rural health conditions in many sections of our country are concerned, the scientific work of the last quarter of a century might as well have never been done. This condition is fundamentally due to two facts: First, the science of public health is a complex of specialties, to be mastered, even in principle, only by an expert with years of training and to be efficiently administered, in its various branches, only by a group of trained workers under such expert supervision; second, a small community cannot financially afford the services of such a staff. The situation has one redeeming feature: the small town which cannot afford a trained staff requires but little of the time of each of its members, so that coöperation among towns is plainly indicated. The minimum group for a complete and efficient health office is necessarily a complete, though diminutive, city office and cannot be farther subdivided. If this group be too large for the needs and financial resources of the small unit of population, there remains the necessity of broadening the territory.

With a view to the overcoming of these deficiencies in the health work of small communities, and in an endeavor to find a practical solution of the difficulties, an experiment in coöperative public health administration was undertaken under the auspices of the department of biology of the Massachusetts Institute of Technology. This important work was under the immediate supervision of Prof. Earle B. Phelps of the Hygienic Laboratory, United States Public Health Service, but at that time on the Faculty of the Institute. The report of the work has just appeared as a publication of the Public Health Service, and for those interested in the improvement of the health affairs of small urban and rural communities will be a most illuminating document. A staff, comprising an administrative officer, a secretary and bacteriologist, a plumbing and sanitary inspector and an assistant inspector with the necessary clerks, and with special assistants for certain special work, was first organized. The services of the staff were offered to several communities, which were invited to enter into a contract with the organization for one year. The towns of Wellesley, Belmont, Framingham, Needham, Weston, Canton and Winchester, and the city of Melrose accepted this proposition, the three last named for milk inspection only. Headquarters were established in Wellesley with a fully equipped office and laboratory, while the telephone and an automobile and motorcycle provided rapid communication between the various centers of activity.

Especial attention was given to the milk supply and to the rapid handling of laboratory diagnostic work. Small portable incubators were located at the various centers, so that diphtheria cultures deposited any time before midnight were in a condition to be examined and reported on early the next day. Particular emphasis was laid on the importance of

studying each case of contagious disease as to its origin and, especially in the diphtheria work, this policy led to results of immediate and demonstrable value.

In the milk work reliance was placed wholly on a campaign of publicity, coupled with a helpful attitude toward the milk men who desired the assistance of the office in the improvement of their supplies. Monthly reports, chemical and bacteriologic, were published in the daily press. Fly and mosquito exterminating campaigns were organized in several of the towns. Special attention was given to the sanitary inspection of markets and shops and to the general sanitary improvement of the town as a whole in matters of drainage, fly-breeding conditions and general cleanliness.

The most interesting feature of the work, next to its promptness and thoroughness, is the very low cost at which it was carried out. Exclusive of plumbing inspection, which is not properly a board of health function, the total cost of the work was 19 cents per capita per annum. The total population served was 62,000 persons, 32,000 of whom received only the milk inspection service. The work which was begun as a practical experiment in the science of public health administration has been continued by the towns interested on a considerably enlarged basis with a sufficient appropriation to make it self-supporting and, what is more important than all else with the cordial support and backing of an enlightened public opinion.

The great value of the report is to show, in a convincing way, that the problem of providing for the health work of small communities can be taken care of in a feasible and satisfactory way at a reasonable cost. It is hoped that other communities will take up this movement.—*Journal of the American Medical Association of Chicago*.

John Ritchie, Jr., speaking today at the Rhode Island State Conference of Charities here, described "Coöperative Health Administration—A Tech-

A Tech Experiment nology Experiment." He told how half a dozen Massachusetts towns have combined in the coöperative public health administration known as the "Technology experiment."

"There was a time, not so long ago," he said, "when there really existed a splendid rural isolation. There has been a great change so that the farm has many of the disadvantages of the city without the advantages. The country demands as many kinds of health work as the city, although the sum of them all may be small. It demands as many kinds of specialists but needs comparatively little work from each one. It is the latter fact and really the financial burden that seems to me to be the prime difficulty in rural health administration. To the efficiency of administration under such conditions the obstacles are manifold. The rural health

officer may be the local physician. The demands of private practice come in numbers at the very moment when the administrative work of the office is greatest and one or the other is sure to be neglected. If the health agent is appointed or if the town government undertakes the work itself there is lack of fitness oftentimes of the man or the body for the work. The considerations under such circumstances are usually political and no standards of qualification are in vogue for this important public service.

"Then there is, not alone in rural districts, but everywhere over the country, the lack of standardization. The pertinent question has been asked illustrating this principle: 'Why should it be dangerous to drink water from a railway car cup within a certain state and safe to drink from the same cup in the same car in the adjoining state?'

"There are certain public functions which are taken up in a coöperative way by adjacent municipalities. There are metropolitan water supplies and metropolitan sewer systems. Some places combine in maintaining parks, some villages have the benefits of the schools of neighboring towns and it is permitted in some states for towns or counties to combine in the building and maintenance of a hospital. There are obvious advantages to such union. The credit for a demonstration is to be given to Professor Sedgwick and his fellows at the Massachusetts Tech. The department of biology of the Institute originated the plan, and developed the details; friends of progress said they would stand behind the experiment financially if need be; Tech professors organized an advisory body against possible emergencies and proffered laboratory facilities, and somewhat more than a year ago the work was begun. There are now seven or eight towns interested, some for the full health administration and others for milk inspection and these all have registered themselves for the second years. Towns working together may by their united purses command a quality of sanitary officer which would otherwise be out of the question. They can secure quick and proper attention to important technical details like the taking and testing of cultures. They have the means of efficient inspection, without fear and without favor."—*Boston Transcript*.

A new plan has been put into operation at the Massachusetts Institute of Technology whereby the freshmen entering this term will have the benefit of an advisory board consisting of one hundred Aiding Freshmen dred of the older students who have already returned.

This advisory board plans to assist new students in every way, especially in registering and securing suitable homes. The plan has been approved by the Technology Faculty and student control will be largely vested in the advisers.—*Greensboro (N. C.) Record*.

BOOK REVIEWS

METALLURGY OF COPPER. By H. O. Hofman, Professor of Metallurgy, Massachusetts Institute of Technology. New York and London: McGraw-Hill Book Co. Cloth; 6 x 9 in.; pp. xiv + 556; 548 illustrations. \$5, net.

This second volume in Hofman's new metallurgical series is maintaining the high standard of the first number on "General Metallurgy."

The author has given a very complete review of the subject and the work will serve many metallurgists as a handy compendium on the subject. Matters are discussed in very great detail and the illustrations, in many cases dimensioned, could be used as working drawings. Much valuable information is condensed in the numerous tables.

The more important chapters are those on smelting and on leaching of copper ores and on electrolysis. In attempting to present an exhaustive treatise in which he has fairly succeeded, the author has been compelled to discuss many devices and practices which in some cases are obsolete and in others used only under exceptional conditions.

The experienced metallurgist will be but little embarrassed by this, but the reader of little experience in the metallurgy of copper may have much difficulty in sifting the wheat from the chaff.

One excellent feature introduced in this series is the constant reference to original authority for every important statement. This gives very great value to the work and enables readers to follow up in detail any particular matters in which they may have especial interest.

Numerous typographical errors mar the work. These will, of course, be removed in a second edition, which will be certain to be called for. It is understood that an edition in German is already arranged for and we look for editions in other languages, for the book is especially complete and up to date.—*Engineering News*.

THE MINISTRY OF ART. By Ralph Adams Cram. Published by Houghton Mifflin Co. \$1.50 net.

Mr. Ralph Adams Cram has come to be an important figure in American architecture, both in his designs for buildings and in his teaching through the spoken and the written word. He now also occupies an influential position as head of the department of architecture at the Massachusetts Institute of Technology. Under the title, "The Ministry of Art" he has gathered eight public addresses which sum up in an interesting way his own strongly held beliefs and ideals. His theories are founded on his religious beliefs, which are those of an extreme sacramentalist Protestant Episcopacy. He would deny ecclesiastical Gothic to all worshipers who do not make the sacrifice of the mass the center of their service. He would refound building in a religious spirit by taking up the provincial and, as many of us think, decadent English Perpendicular style where it was left off under the influence of the renaissance, which Mr. Cram does not love. Mr. Cram has built many churches and other public buildings in this spirit, and must be reckoned with as a force in art and in religious thinking. His enthusiasm, knowledge and power of expression make these addresses notable, and they will do something, we hope, to spread a deeper feeling for the worth and meaning of art in the life of the nation.—*The Congregationalist*.

CLASS OF '98, MASSACHUSETTS INSTITUTE OF TECHNOLOGY, FIFTEEN-YEAR BOOK.
pp. 130, frontispiece and illustrations; bound in gray and blue; published by the class of '98.

The Fifteen-Year Book of the class of '98 is a very complete record of each member of the class, and also contains the statistics of the class and a description of the fifteenth reunion at Wianno by C.-E. A. Winslow and Lester D. Gardner. The Committee on Publication consisted of A. A. Blanchard, E. S. Chapin, L. D. Peavey, E. F. Russ, and G. R. Wadsworth.

CLASS BOOK OF THE CLASS OF '97, M. I. T. 116 pages, illustrated by pictures of the class, published by the class of '97.

The '97 class book is an attractive little volume bound in yellow and black, and contains the biographies of the individual members of the class. It also contains a chronicle of the fifteenth anniversary of the class at Osterville two years ago, and a group picture of the class taken during its junior year.

3rd Annual Convention

of the

Technology Clubs Associated

at Pittsburgh

February, 1915

See Later Notices

NEWS FROM THE CLASSES

1868.

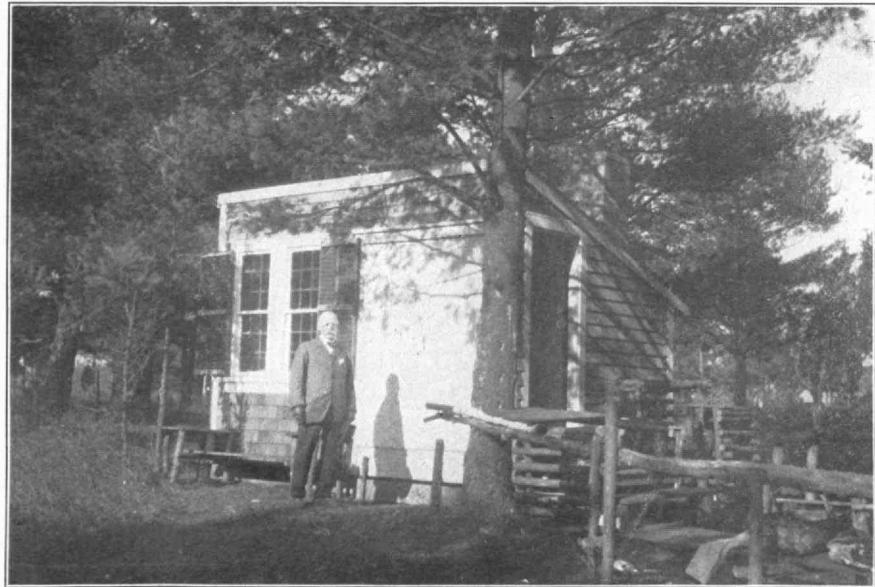
ROBERT H. RICHARDS, *Sec.*, Mass. Inst. Tech., Boston, Mass.

The secretary has had a summer of travel and has visited twenty-seven states West and South. Many gatherings were held in honor of the Institute, and at each of these dinners the good work Dr. Maclaurin has accomplished for the school, and all things of interest, departmental or otherwise, were discussed.—At the meeting at Hotel Scott, Hancock, Mich., July 7, there was much enthusiasm in which the following men joined: Karl C. McKenney, '12; J. M. Longyear, Jr., '10; Gardner Rogers, '02; O. D. Fellows, Jr., '04; L. H. Goodwinn, '12; George L. Heath, '88; Thos. G. Chapman, '09; H. E. Whitaker, '09; W. D. Stevens, '13; Claude H. Cooper, '03; Robert H. Richards, '68.—About ten days later the secretary was at Silver Bow Club, Butte, Mont., where there was a jolly meeting and dinner. The members present were: Charles W. Goodale, '75; C. D. Demond, '93; Rudolph Emmel, '11; Albert E. Wiggin, '07; John A. Root, '06; F. C. Jaccard, '07; N. S. Hammond, '08; Lloyd T. Buell, '05; Ralph Hayden, '06; J. A. Brophy, '16; Warren Jenney, '94; Robert H. Richards, '68; Charles T. Main, '76, was in town, but was prevented from joining us.—An impromptu meeting of five, including C. W. Goodale, '75; E. S. Bardwell, '06; Haven Sawyer, '99; F. R. Ingalsbe, '06, and Robert H. Richard, '68,—held at Wallace, Idaho, was most pleasant. The next day an enthusiastic dinner took place at Spokane, Washington. The various problems Tech is encountering were presented. Sonnemann, '90, spoke interestingly of the civic improvement of Spokane. The city is a place with the most extraordinary natural advantages and has had the services of broad gauge men to save those advantages for the improvement of the city before they were lost for all time to the public good. Those present were C. W. Goodale, '75; F. F. Emery, '81; Francis P. Rooney, '94; Foster Russell, '11; E. S. Bardwell, '06; Philip F. Kennedy, '07; D. C. Campbell, '98; George A. Sonnemann, '90; F. R. Ingalsbe, '06; Robert H. Richards, '68. A beautiful drive was taken the next day, visiting the present and prospective park system of Spokane. They are doing wonderful things there.—Forty-seven men are listed at Portland, but through a miscarriage of plans only the following were present: F. A. Naramore, '07; R. E. Cushman, '06; W. G. Holford, '01; Wm. H. Crowell, '05; Robert H. Richards, '68. Though the number was small, no enthusiasm was lacking.—At the University Club of San Francisco July 28, we



Upper Row: Miss Scudder, Miss Loring, H. C. Read, F. H. Pond, G. B. Elliot, J. C. Chase, C. P. Howard, C. F. Read, E. Holbrook, A. C. Warren, E. Schwab, W. R. Russ

Lower Row: Mrs. Warren, Miss Pond, G. H. Barrus, I. W. Litchfield, '85, Mrs. S. J. Brown, Mrs. Russ, Miss Russ



Cabin on Sam Brown's picnic grounds

had a great gathering and discussed everything from A to Z. The members present were W. H. Shockley, '75; Edward C. Taylor, '14; Howard F. Clarke, '12; H. W. Stebbins, '02; F. S. Phelps, '06; John Stafford White, '92; J. B. Lukes, '92; Leonard Metcalf, '92; Murray Warner, '92; B. P. DuBois, '92; G. E. Woodbridge, '93; H. S. Dutton, '95; John R. Brownell, '01; E. F. Kriegsman, '05; F. H. Harvey, '93; Allen Hazen, '88; Austen Sperry, '94; Reginald Norris, '95; Henry C. Marcus, '01; William E. Leland, '91; Lester F. Miller, '01; Edwin B. Mead, '99; Herbert D. McKibben, '07; Charles H. Alden, '90; Frederick M. Eaton, '05; Ludwig Rosenstein, '10; Robert H. Richards, '68.—At the Steptoe Hotel, East Ely, Nev., August 7, we had a nice little dinner with three present; Allan G. Waite, '13; J. C. Kinear, '07; Robert H. Richards, '68.—We had a large gathering August 12 at the University Club, Salt Lake City, and talked over Technology affairs with great interest. Members present were: W. Lindgren, Lewis T. Cannon, '96; E. H. Perry, Harvard, '09; R. E. Wells, Jr., '14; G. F. Loughlin, '03; K. S. Rood, '07; Carl J. Trauerman, '07; H. J. Stiebel, '09; Rudolph Emmel, '11; Owen H. Gray, '97; I. H. Damon, '05; M. H. Foss, '09; Bradley Stoughton, '96; E. S. Bardwell, '06; G. C. Riddell, '04; E. P. Fleming, '01; Bayard W. Mendenhall, '02; W. B. Fisher, '78; C. S. McDonald, '99; C. W. Goodale, '75; W. H. Trask, '06; Robert H. Richards, '68. The question of four years or five years for the course leading to a degree was discussed and a vote taken in which fifteen voted for retaining the present four years while three voted for five years. Those not voting were not present when the vote was taken. The upshot of the discussion was that the average boy cannot afford more than four years; all agreed that there should be a fifth year of advanced work for those who can stay and wish to do so.

A second dinner August 14 was held at the Hotel Utah. It was the banquet of the American Institute of Mining Engineers at which the Tech men sat together at one table. Fifteen were present, all of whom are included in the above list, except C. Stanley Sears. They cheered lustily for Tech and for the other things that especially attracted their interest.—E. G. Goodwin, '03, A. H. Rogers, '90, and R. H. Richards, '68, had a spur-of-the-moment meeting at Hotel Atkin, Knoxville, Tenn., October 11. They hoped to have had a dinner with Polhemus and Fanning but it proved impossible on account of absence from town.

In general the Tech men are turning out results of which they and their Alma Mater may be proud.

1874.

CHARLES FRENCH READ, *Sec.*, Old State House, Boston, Mass.

The class of '74 celebrated the fortieth anniversary of its graduation by holding a reunion on the afternoon and evening of June 30 last.

A large number of the class association, accompanied by their wives, children and friends, first journeyed by train or harbor boat to the attractive summer home, in South Hingham, of their former classmate, Samuel J. Brown, the well-known architect of Boston.

The following persons comprised the party: George H. Barrus, president of the association; Charles F. Read, secretary and treasurer; Mr. and Mrs. Willis R. Russ, Miss Russ, Mr. and Mrs. Albert C. Warren, Mr. and Mrs. George B. Elliot, Frank H. Pond and Miss Pond, Elliot Holbrook, Charles P. Howard, Emil Schwab, John C. Chase, Mr. and Mrs. Samuel J. Brown, Harold C. Read and Miss Scudder, J. H. Wilder, Miss Loring and, last, but not least, I. W. Litchfield, '85, representing the Institute.

After a cordial greeting from the host and hostess and an inspection of their ancient house and barn, the party walked to Mr. Brown's beautiful pine grove and enjoyed an appetizing out-of-door luncheon.

Then all gathered in a circle and were welcomed to the fortieth anniversary by President Barrus, after which he introduced Mr. Litchfield as the representative of the Institute in the absence of President Maclaurin. Mr. Litchfield, amid the aroma of the pine trees and the fragrance of Havana cigars, contrasted in a graphic manner the days of "auld lang syne" (1870-1874), when the class was at the Rogers Building, with the present great activities of the Institute and the greater ones to come at the educational palaces on the Charles River embankment.

The party then went by trolley car to Paragon Park, where they found awaiting them William E. Nickerson, George E. Doane and Miss Hathaway, Mrs. Barrus and Mrs. Schwab. At six o'clock an elaborate dinner was served on special tables at the Palm Garden and while it was in progress the "cabaret show" was enjoyed by all present. Return to Boston was made by automobile and harbor boat and the fortieth anniversary of the class of '74 passed into history.

"Our Alma Mater, last of all;
To her we bend the knee,
Although her days are prosperous now,
Far greater may she see.
And, if she looks for loyalty
From sons, full many a score;
She'll find none truer than from us,
The class of '74."

(From a class poem).

In connection with the fortieth anniversary celebration, the class association will issue, at the close of the current year, a commemorative volume of biographies, each one accompanied, so far as possible, by photographs, one taken while a student, the other as late in life as possible. As about 90 per cent of the biographies have been so far collected, the success of the book seems assured.

1875.

EDWARD A. W. HAMMATT, *Sec.*, 15 Water Street, Newton Center, Mass.

Frank Stanwood Dodge, son of Jonathan Stanwood, and Charlotte Procter (Allen) Dodge, was born October 31, 1854, at Beverly, Mass., and died July 17, 1914.

His early education was obtained in the public schools of Beverly, and he entered Technology in '71, where he was graduated in '75 in the civil engineering course.

He then spent two years with the United States engineers on rivers and harbor work, and four years as field assistant on Hawaiian government surveys.

He returned to the United States to act for two years as assistant engineer at Pullman, Ill., when he accepted a position as engineer with the Union Iron and Steel Company of Chicago. He remained with that firm but a short time, leaving at the end of two years to become assistant engineer for the Bureau of Public Parks of New York. He spent two years in New York, when he returned to Honolulu where he resided until his death.

He was engineer in charge of city work, Honolulu from 1887 to 1898, commissioner of grades for Honolulu and Hilo in 1890, member of the Board of Public Instruction, Territory of Hawaii, 1890; and since 1898 superintendent of the Bishop estate.

He held the commands of lieutenant and captain, First Company, Sharpshooters National Guard of Hawaii, from 1893-98, and was a member of the Hawaiian Chapter of American Society Sons of the Revolution, also of the Hawaiian Rifle Association.

Frank was married August 1, 1883, to Anna Gould Peabody and they had four children: Charlotte Peabody, a graduate of Smith, '06, and instructor of history at Oahu College; Stanwood, a graduate of Cornell, '13, in electrical engineering; Francis Beverly, with the United States Geological Survey; and Philip Hamilton, in business.

In the latter part of 1895 Dodge went to England in connection with some government work, and on his return visited his old home in Beverly. Our class meeting, held in January, 1896, was timed so that he could attend and so far as I know this is the only time Frank was in the east since he went to Honolulu in 1887.

In 1912 Dodge wrote me that for six years he had had hardening of the arteries at base of the brain, and I note from the Honolulu paper that about two years ago he went to a sanitarium at St. Helena, Cal., where he died.

1876.

JOHN R. FREEMAN, *Sec.*, Grosvenor Building, Providence, R. I.

The secretary of the class had a pleasant surprise last summer in meeting one of the earnest men of '76, long lost to the view of most

of his classmates and who had found his life work along different lines from those contemplated in his freshman year when architecture was an ideal.

Leaving the Institute and turning to pure art rather than art applied in structures, Charles L. Fox studied for several years under some of the most noteworthy artists of France, and later, to fit himself more fully for a class of decorative art that particularly interested him, obtained employment for about two years as a weaver of tapestries in the celebrated factory of the Gobelins at Paris. Meanwhile, prompted at first by economic motives and later by motives of human interest, he made his domicile in many of the humbler quarters of the city—finally in some of the very humblest—and became profoundly interested in the struggle of the submerged part of humanity and in their point of view. So deeply were his sympathies aroused that he became a pronounced Socialist and these views remained after his return to America and with the earnestness that was always characteristic of the man, and not without some of his old-time sense of humor, he, as a painter, sought admission to the Painters' and Decorators' Union. Failing health cut short much of his activity in the line of art, but his interest and earnest work for humanity has long been a controlling impulse and, wherever the fortunes of life have taken him, he has been an earnest counsellor in matters of social betterment to farmer, artisan and politician.

Like Antaeus of old, he has found that his strength could only be retained by contact with the earth and the writer found him industriously cultivating a most remarkable garden of flowers and vegetables that surrounded a beautiful bungalow on one of the Maine hills, overlooking the White Mountains and a foreground that should satisfy any artist. The interior showed everywhere the artist's touch, as did the "wayside gardens" of gorgeous color in rare harmony, near at hand, and on the walls were a hundred or more paintings in oil of the various American native mushrooms, which he had found during botanizing tramps. Probably no such remarkable series of portraits of the mushroom family has ever before been made, and it is to be hoped that the artist may be prevailed upon to have them published by some of the recent processes of autographic color printing.—The secretary has the pleasure of an occasional evening with Martin Gay on the steamboat en route between New York and Boston, for Martin some years ago succeeded to the home of his ancestor, the famous pastor of Hingham, whose pastorate to one flock covered more than half a century, and while wife and daughters spend the summer there, Martin comes over for the week-ends. He carries about with him the same cheerful philosophy of life for which he was famous among his classmates, forty years ago, and finds plenty to keep him guessing in his work on the public works of New York City.—Frank W. Hodgdon, chief engineer to the Port directors of

Boston, has had his hands full during the past year in designing and building in record time the great pier houses on the Commonwealth docks in South Boston, which are among the most noteworthy structures of their kind in the world. It has been a rush job in which quality and perfection of detail have had to receive their full share of attention. It falls to the lot of few American civil engineers to lead a professional life so constantly in one line as has our friend, Hodgdon. Some of the earliest work that he did after graduating was that of surveying the South Boston flats, where the Commonwealth piers are now located, and, later, substantially all of his professional life has centered around harbor improvements for the Commonwealth of Massachusetts. With an occasional brief "vacation" on such work as Canal building in Florida or supervising the adjustment of the National boundary line of Panama.

In his position of chief engineer to the Massachusetts Harbor and Land Commission, he was for many years a notable figure at the Boston State House and his remarkable gift of common sense, his intimate knowledge of facts gained from long continuity in office, and above all, his transparent honesty of purpose, made his counsel often sought by the country members of the general court who were puzzled among the conflicting stories picked up on Beacon Hill.—Theodore Schwarz appears to be in decidedly better physical condition than four or five months ago and still meets the world with a smile. He is confined indoors but keenly alive to what goes on outside and it gives him great pleasure to have any of his classmates call at his home, 67 Winthrop road, Brookline, Mass.

1881.

FRANK E. CAME, *Sec.*, Metcalfe Apartments, Westmount, Quebec,
P. Q.

FRANK H. BRIGGS, *Asst. Sec.*, 10 High Street, Boston, Mass.

George A. Mower sent the treasurer of the Tech Club of New York a check for \$25 to pay for a panel in the Stein Room. Abbott picked out panel No. 81 and under date of June 8, 1914, Mower writes:

Your letter of the 28th ult. is received and I am very much obliged to you for picking out a panel in the Stein Room for me. It is certainly a curious and happy coincidence that it should bear the number "81." I trust that the members of our class when they see it will remember that, although I am far away across the ocean, I often think of them and take a real interest in our old Tech.

Recreation and Outdoor World for July had an interesting article by Ed. Warren, entitled: "An Object Lesson in Big Game Conservation, in Yellowstone Park," with some fine photographs by the author, made last winter.

1882.

WALTER B. SNOW, *Sec.*, 136 Federal Street, Boston, Mass.

Grenville Temple Snelling is now of the firm of Snelling & Metcalfe, Architects, 114-116 East 28th street, New York City.—Walter B. Snow has removed his business as publicity engineer to Rooms 511-516 in the new Federal Street Building, 136 Federal street, Boston.—Winslow B. Ayer's address is now 183 North 19th street, Portland, Ore.

—There has recently been published the Proceedings and Addresses Commemorative of the Two Hundredth Anniversary of the Incorporation of the Town of Lexington, containing the historical address delivered by James P. Munroe, whose family history is so closely interwoven with that of this historic town.—John F. Low is now connected with the Knickerbocker Mail Order Company Inc.), 320 Fifth avenue, New York City.

1884.

HARRY W. TYLER, *Sec.*, Mass. Inst. of Tech., Boston, Mass.

The secretary has been interested to receive the marriage announcement of Mr. Charles A. Bardwell (son of F. L. Bardwell) to Miss Vera May Mathewson of Minneapolis.

—Among the graduate students registered at the Institute at the present time are Edgar Steel Robinson, son of Theodore W. Robinson, '84, and Miss Harriet Park, daughter of the late Dean W. Park, '84.

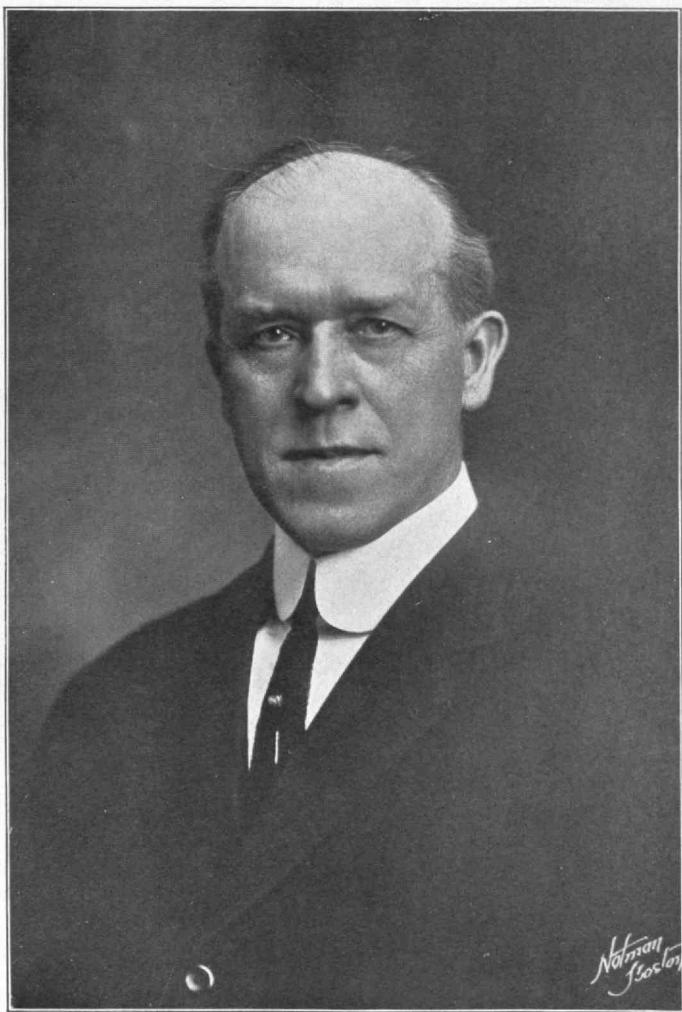
Mr. Robinson is a graduate of Harvard University and is now taking electrical engineering at the Institute. Miss Park after graduating at Stanford University, is taking a special course in biology here.

By the courtesy of Dean Burton the following biographical sketch prepared for the Society for the Promotion of Engineering Education is published in the REVIEW:

PROFESSOR CHARLES LABAN ADAMS

1856-1914

Charles Laban Adams was born November 26, 1856, in New York City. At an early age his family moved to Dorchester, Mass. His early education was in the public schools, and later in the Massachusetts Normal Art School. He also studied painting at the Art Museum and with A. Oudinot, a French landscape painter and pupil of Corot. His ambition was to excel in landscape and portrait painting, but financial necessities obliged him to enter the city surveyor's office in Boston, where for several years he was engaged in surveying and drafting. He became very proficient in mechanical drawing, and one of his earliest drawings of a locomotive was exhibited at the Centennial Exposition in Philadelphia, receiving a special prize.



CHARLES LABAN ADAMS, '84

Professor Adams had been a teacher of Drawing at the Massachusetts Institute of Technology since 1881. In 1881-82 he took a special course, in his spare time, in the mechanical engineering department. This work associated him with the class of 1884, M. I. T. In 1885 he developed a course in lettering and a course in freehand drawing for the architectural department, the latter course including the study of the human figure as a part of decorative design. In 1903 he was appointed assistant professor of drawing and descriptive geometry. In 1904 he was appointed associate professor; and in 1912 professor of drawing and descriptive geometry.

The books published by Professor Adams are as follows: Letter Drawing Plates, first published in 1893; second edition in 1895; third edition in 1904. In 1905 he published a book on "Mechanical Drawing, Technique and Working Methods for Technical Students." In 1907 he published Notes on Descriptive Geometry and Descriptive Geometry Part I. In 1908, Part II, Descriptive Geometry. In 1910, Part III, Descriptive Geometry. These books were published by Professor Adams for use in his classes at the Institute, but they had a considerable sale in other colleges and preparatory schools throughout the country.

Professor Adams always kept up his interest in painting, and exhibited at the Art Clubs in New York, Philadelphia and Boston. He was a member of the Boston Art Club and the Technology Clubs of Boston and New York. For many years in addition to his teaching at the Institute Professor Adams was master of the Roxbury Free Evening Drawing School. He became a member of the Society for the Promotion of Engineering Education in 1904.

In June, 1914, Professor Adams started on a trip to Italy, Germany and France, intending to return by way of Liverpool. While taking a journey down the Rhine he had an attack of appendicitis and went as quickly as possible to the hospital in Amsterdam. The operation was performed at Boerhaave Kliniek in Amsterdam, and it seemed to be successful, but he realized that he would not be able to return at the opening of the term and wrote a number of letters to the Institute, one dated as late as September 11. A change for the worse came soon after this and he died September 16. He is survived by a widow and three children. The older son, Richard L. Adams, is a graduate of the Massachusetts Agricultural College, and the younger son, C. Robert Adams, a graduate of the Civil Engineering Department of the Massachusetts Institute of Technology.

Professor Adams was possessed of rare executive ability and the capacity for organizing the instruction for large classes. During the last ten years he has arranged and superintended the work in freehand, mechanical drawing, and descriptive geometry for four hundred first-year students at the Massachusetts Institute of Technology, at the same time directing the more advanced work in figure drawing in the Architectural Department of the Institute.

He was one of the few instructors in drawing who made it plain that the training in the making of a particular drawing is the important thing, and not the drawing itself. He always impressed on his pupils the importance of drawing as the means for developing the memory and stimulating the powers of observation and imagination. By his death the community loses a very able educator and an artist of merit.

1885.

I. W. LITCHFIELD, *Sec.*, Mass. Inst. of Tech., Boston, Mass.

William D. Fuller left Boston for the West soon after leaving the Institute, and '85 men have seen little of him since then. He made one trip east calling on the secretary and a few other classmates. We are in receipt of a letter from him which tells of his interest in the class and his movements since he left the Institute. The letter is as follows:

In going through my desk I came across your circular letter, and I must acknowledge that its date shows a woeful lack of promptness on my part in responding to it.

There is very little for me to do except send my address. As you have doubtless noticed, I have not kept at all in touch with the old class of '85, this aloofness following largely from the fact of my comparatively brief connection with it and a subsequent longer and more intimate connection with other schools. I am glad, however, to have my name on the rolls, and especially glad to get any information concerning the boys. Only yesterday I was reading the little published memorial of Oakes Ames, received some time since, and though the interest was necessarily a sad one, it interested me greatly to read of his work. I remember him well.

You may remember that I looked in on you nine years ago this summer, and since that time I have seen no '85 man. There are many later class men here in Los Angeles and I have met them several times at the University Club, but they belong to another generation and are not particularly interested in me.

It's very good of you to keep me on the list, and I appreciate all the literature I received. I am still in the Weather Bureau Office here in Los Angeles, where I have been for nearly sixteen years, barring an absence of a little over a year in Portland, Oregon, and Fresno, Cal., about five years ago. My health is not good, but I manage to peg along and have raised up a family of three boys, two of whom are married and one of whom has made me a grandfather.

Parker Choate, who has been a prolific inventor, has recently become connected with the National Lead Company as research metallurgist for this corporation under a special arrangement which takes into consideration inventions owned by him. He is residing at 2305 Beverly road, Brooklyn, New York, with an office at 129 York street, the laboratory of the company. He spends much of his time in St. Louis where the company has large interests, and where he has opportunity to conduct tests in large furnaces. —One of the most loyal men of the class is A. H. Doane, who went out West not long after leaving the Institute, and who has had very little opportunity to meet '85 men since that time. He is treasurer of the Union Pacific Coal Company, the Washington Union Coal Company, the Porter Fuel Company, and the Superior Coal Company, and is located in Cheyenne, Wyoming. The following letter will be interesting:

The headlines of this letter will answer your questions as to what I am doing, with whom and where. As you see, I am handling the "dough" for several concerns but thus far very little of it seems to stick; consequently I am not in shape to donate a section of land to the Tech Fund as I would like.

I am mighty sorry not to be able to take in any of our annual feeds. It is a privilege I have been deprived of. Nevertheless I have not lost my interest in '85 and there is a decided expansion of the chest whenever I read of the doings of '85 or any of its members. Some of you fellows ought to be out in this neck of the sage brush for a while in order to fully appreciate the good times you are having.

Newell I have seen several times on his trips West. Harry Barr also dropped in on me some five years ago, but outside of these two I have hardly seen an '85 man since leaving the Tech.

Hayes has been concerned principally during the past five or six years as a consulting engineer, devoting himself to questions relating to the valuation of public utilities. He has acted as an expert on this subject in a number of cases. He has recently published a book entitled: "Public Utilities: Their Cost New and Depreciation" (D. Van Nostrand, New York), and has published a number of articles in magazines. Among the more important ones was "Original Cost Versus Replacement Cost as a Basis for Rate Regulation" published in the *Quarterly Journal of Economics*, and "The Public's Financial Interest in Public Utilities," published in the *North American Review*.—Fiske has been in Boston since 1907, when he began his present work as an investment broker. He recently formed the firm of Redington, Fiske & Company at 50 Congress street. The firm is a member of the Boston Stock Exchange. He lives in Needham, Mass. He has four boys and one girl. Any of the members of the class of '85 who honor him with a visit will find the latchstring out and a hearty welcome.—Hugh MacRae is chiefly interested in the Tide Water Power Company of Wilmington, North Carolina, in which property he has the controlling interest. This company controls the electric lighting, power and traction interests in that city, also the gas plant and the suburban railway to the ocean. He is also interested in the developing of large areas of agricultural lands and in solving some problems in connection with them which will be of material advantage to all the Southern States. The contemplated developments involve the colonization by different nationalities, the best methods of intensive farming, the marketing of products, utilization of resources from the timbered lands, etc. He suggests that this offers ample opportunities for a young man of his size to keep busy.—C. Morris Wilder, who spent three or four weeks in Boston recently, was entertained at luncheon by a few '85 men late in October. Morris has a boy at Harvard and next year will have two. He expects to spend the winter of 1915-16 in Boston.

1886.

ARTHUR G. ROBBINS, Sec., Massachusetts Institute of Technology.

David Van Alstyne, formerly of the American Locomotive Company and later vice-president of the Allis-Chalmers Company,

has been appointed assistant to the vice-president of operation of the Central New England Railway Company with headquarters in New York, in charge of the test and store departments, and of handling scrap. Van Alstyne will also have supervisory authority over the mechanical department in regard to organization, shop practice, approval of design, standards, and requisitions.

1888.

WILLIAM G. SNOW, *Sec.*, 24 Milk Street, Boston, Mass.

Very little news has filtered through to the secretary during the summer.

J. C. Runkle accompanied by Mrs. Runkle recently spent a couple of months in Alaska and British Columbia.—S. E. Thompson has been specializing of late in efficiency engineering, cutting down the cost of production in large manufacturing plants, this in addition to his usual concrete engineering. He has surrounded himself with a staff of experts in the various lines he covers.—Stone and Webster are progressing rapidly with the construction of the new Institute buildings.—A. D. Nickerson has been engaged in engineering work in Maine.

1889.

WALTER H. KILHAM, *Sec.*, 9 Park Street, Boston, Mass.

The *Boston Globe* of April 15 has the following:

Charles Cheney, member of the famous silk manufacturing family of South Manchester, was born in Hartford, June 7, 1866, the son of Col. Frank W. and Mary Bushnell Cheney. He attended St. Paul's School at Concord, N. H., and studied a year at the Massachusetts Institute of Technology.

He is secretary and treasurer of Cheney Brothers of South Manchester and president of the Silk Association of America. He is a director of the Connecticut Mutual Life Insurance Company and the National Fire Insurance Company of Hartford and of the Chemical National Bank of New York City.

The 1913 annual report of the Electrical Bureau of the city of Philadelphia of which Pike is chief, is at hand and its perusal indicates the improvements that have been made and the efficiency with which the department is now being conducted in comparison with its previous condition. The total gain in efficiency for 1913 over 1912 amounts approximately to \$67,000, not including improvements and extensions.—A late number of the *Boston Herald* under the head of "A French Scientist's Reply to Professor Francke" contains a concise and clearly worded statement by Sauveur of the position of France in the present war.—At the time of writing, October 20, the circulars relating to the forthcoming class book are in press and will probably be received by the classmates before the appearance of this number of the *REVIEW*. The secretary urges as prompt a reply as possible in order that the book may be published by next June.



Sloop "Irene" of Bridgeport with fishing party

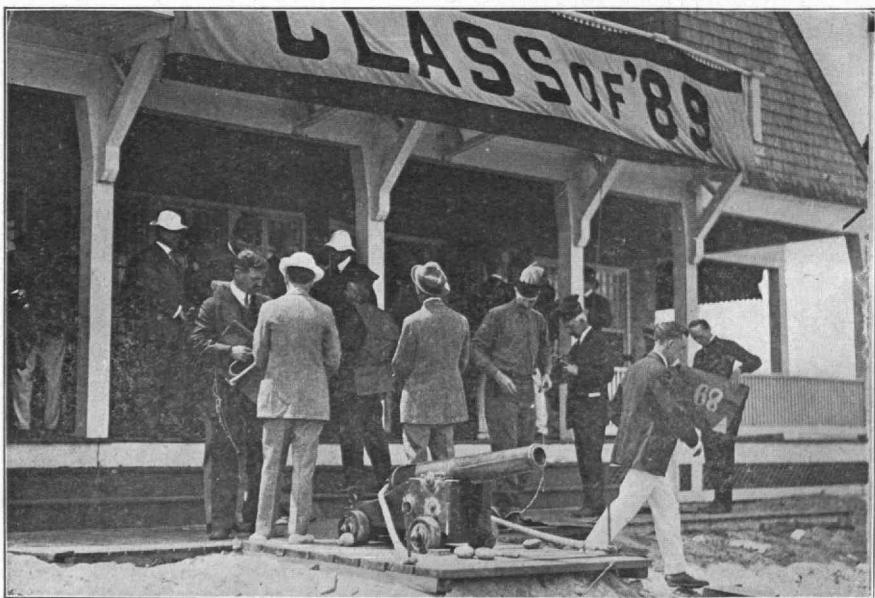


Drum Corps Practice

25TH ANNIVERSARY OF THE CLASS OF '89

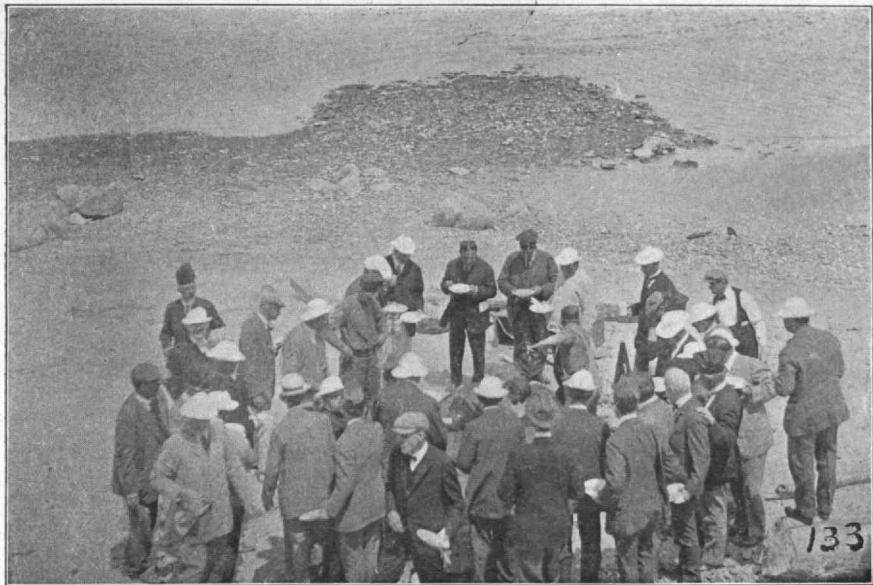


The Uniforms and the "Cow"



Preparing for Parade and Bake

25TH ANNIVERSARY OF THE CLASS OF '89



The Bake



The Chowder Line

25TH ANNIVERSARY OF THE CLASS OF '89



The Bake Animals



Keg Conference

25TH ANNIVERSARY OF THE CLASS OF '89

The twenty-fifth annual reunion of '89 was held at the Hartford Yacht Club, at Saybrook Point, Conn., on June 5, 6 and 7, and reported in the TECHNOLOGY REVIEW for July. That report was incomplete in a way, in that it lacked pictorial representation, for the easily understood reason that the photographs of the doings were not available at the time of going to press. At this present time, however, the editors of the forthcoming Third Book of '89 have much material in hand, including many photographs, and they have graciously allowed the reproduction of the accompanying lot. The REVIEW gives them the small free advertisement of saying that the book will be even better and richer than these few examples might indicate.

We of '89 feel that the jealous glance of every other class is constantly noting our doings, and that it is hardly necessary to recapitulate the narrative of what we did to put Connecticut on the map. But as helpful suggestions to those whose fortunes placed them in other classes, we are pleased and proud to show a part of our album.

Exhibit A.—The sloop *Irene*, of Bridgeport, and though we didn't catch a darned fish except Hollis French's dead one (that was put on when he wasn't looking), she gave us some pleasant sailing. Sea songs and shanties (on a smooth sea) gave a zest to her handling, and when we left her, her main brace had been spliced in a most workmanlike manner.

Exhibit B.—Drum Corps Practice. Marsh and Latta, snares, and Mauran, bass. The advisory board, from left to right, includes Underhill, Wales, Hawkins, Durfee, Pierce, Pike, and an unknown modest person whose nose sticks out from behind a piazza post.

Exhibit C.—The Uniforms and the Cow. Here we are clad in our regalia, and, after the parade, are slaking our thirst at the Cow who gave us, through separate conduits, the same milk of human kindness. Crane and Hall are the beginning of the left wing, Sauveur modestly covers his face, and Cartwright, Cutter and Bosworth bring us to the centre. Durfee and Hobbs are supporting right centre, and Parker stands by the gun, apparently wishing he had a belt. Hawkins appears next to the end.

Exhibit D.—Preparation for Parade and Bake. W. S. Johnson (who has kept his hair) is clutching his bugle while he talks with a modest (back-to) person, probably E. V. French. Hall, somewhat in the background, needs a slight pulling down of his brassiere; next him (back-to again) is Rollins, but Jerry Ayer, and Lewis, unafraid, have allowed the camera to play on their features. The sport who hops through the foreground in white trousers is of the Yacht Club staff, and beyond him Stone is figuring out how the garters hitch on to the strange garment just handed to him.

Exhibit E.—The Bake. All anxieties allayed, the class is seen surrounding and admiring the curious animals as they lap up their

chowder. (The class laps chowder, not the animals.) The REVIEW can hardly afford the space for a diagrammatic chart of identification, but the curious may pick out Hobbs, Kilham, Lewis, Parker, Ayer, Deetz, Howard, Pearson, Borden, and Underhill, and perhaps others.

Exhibit F.—The Chowder Line. Dimly discerned in the left background are our professional assistants. Smythe, without a hat, is the first unquestionable identification coming from the left. Hobbs and Cutler bear away their takings; Hobbs probably has burned his thumb. White is in line back of Hobbs, and Gleason's checkerboard hat is partially obscured by Cutter's presence. Mott, Whiting and L. E. Johnson smile in pleasant anticipation. The last two men on the right end are more difficult of identification.

Exhibit G.—The Bake Animals, or, "when the pie was opened, the birds began to sing." Nobody but Rollins could, would or should have done this, and how he got them under the clambake cover without detection is still a mystery. When the cover was removed we saw an Armadillo, a Seal, a Pig, several Snakes, a Turtle (big feller) and nobody knows what besides. However, the clams and lobsters were there too, so all's well that ends well.

Exhibit H.—Keg Conference. This pleasing ceremony took place just before the bake, with Alley in charge. His back is turned to us,—Duty before Pictures. Why his supporters look so dark is a mystery; they were really beaming. Still, we can (we think) pick out Mott, White, Cutter and Dunphe, on Alley's left. His neighbors on the right are more difficult to identify.

But,—just wait till you see the Third Book of '89!

1890.

GEORGE L. GILMORE, Sec., Lexington, Mass.

An article appeared in the magazine department of the Boston Sunday *Globe*, September 17, by Henry M. Waite, on running a city as a "Business Enterprise." "Chic," as is known, is city manager of Dayton, Ohio, and in this article he describes the modern methods of business that have been adopted in the management of this city under his care. The Louisville *Courier-Journal* prints the following interesting résumé of his work:

Dayton, Ohio, has had a city manager since the beginning of the year and that official seems to have been very busy. He has just submitted his first report and it is devoted altogether to a statement of new municipal activities during the first six months of his administration.

The city manager evidently has been devoting much thought to Dayton's future. A new sewer system has been outlined which will require twenty years for completion. Waterworks improvements have been started on which it is proposed to expend \$2,000,000 over a period of sixteen years. A plan is being prepared for the elimination of grade crossings. A number of years also will be required to complete this program. A Civic Plan Board has been appointed to prepare a scheme of

city development, including a civic center for public buildings. Plans have been secured for a garbage disposal plant and the equipment necessary to care for all garbage and refuse, considering the city's growth for twenty years. The park system is being enlarged on a comprehensive scheme.

Already some material improvements have been made in the methods of handling city funds. An up-to-date accounting system has been adopted. A purchasing division has been created, which shows an average saving of 15 per cent., or \$20,000 annually. An annual budget was prepared in accordance with the best modern practice. Expenditures are kept within the appropriations and appropriations are measured by the city income. The eight-hour day has been installed in all public works, and all employees are required to work the full number of hours.

The city now has a full-time health officer for the first time in its history. The death-rate for babies has been reduced one-half by adequate health service, free clinics and pure milk stations. Two new parks have been opened to the public. A Legal Aid Bureau has been established for giving advice to the poor. Workhouse prisoners are used in the improvement of parks, community gardens and other public works.

Three women probation officers have been appointed, a school for police has been established, and the methods of fire and police divisions have been reorganized.

This is not all, for much more has been done, including the saving of several thousand dollars in interest by paying off \$125,000 of the city's floating debt. The showing is a remarkable one for an administration of only six months' duration. At this rate, the city manager will earn his salary and will accomplish many good things for Dayton.

Billy Creden is with the Utah & Apex Mining Company, Birmingham Canyon, Utah.—E. A. Clark is director of the Alaska Gold Company. With Colonel Hayden he had planned a trip with a party in August to inspect some of the western mining properties, but owing to the sudden changes due to the European trouble, they were obliged to cancel it.—George B. McBean is at 2227 Prairie ave., Chicago, Ill.—F. W. Atwood, vice-president of the Drysalters Club of New England, presided at the July meeting held at Point Shirley, and about fifty members went down the harbor in a tug.—Hayden was an usher at the marriage of Butler Ames.—J. L. Batchelder returned in the middle of June from Europe, and while attempting to play ball on shipboard broke a tendon in his finger and for a few days had the pleasure of carrying his arm in a sling. He expected to return to Europe about September 30 to join his family, but, owing to the European trouble, it is postponed.—G. L. Gilmore spent the latter part of August and early September at Kennebago Lake, Me., enjoying the fly fishing.—William B. Poland, vice-president and chief engineer of the Philippine Railway Company, who has been in charge of the construction and operation of the company's lines for a number of years, left the Philippines June 1, 1914, to return to the United States by way of Australia, Valparaiso, and the Trans-Andean line to Buenos Aires. His address is care J. G. White & Company, Inc., 43-49 Exchange Place, New York City. Construction has been finished, the operation systematized and industrial and agricultural development work along the company's lines in Cebu and Panay organized.

1893.

FREDERIC H. FAY, *Sec.*, 308 Boylston Street, Boston, Mass.GEORGE B. GLIDDEN, *Asst. Sec.*, 551 Tremont Street, Boston, Mass.

The annual dinner and class meeting were held at the Engineers Club, Boston, on Commencement Day, Tuesday June 9, President Edward B. Carney presiding. The officers elected for the ensuing year are president, Harry M. Latham; first vice-president, Charles M. Spofford; second vice-president, Albert L. Kendall; secretary, Frederic H. Fay; assistant secretary, George B. Glidden. A vacancy in the position of class representative on the Alumni Council was filled by the election of George B. Glidden. A. F. Bemis, who had just returned from a six-months' trip around the world, described some of his experiences and spoke particularly of meeting Maki, '93, in Japan, in April. Immediately after dinner the class adjourned to the Tech Night Pop Concert at Symphony Hall, a most successful event carried out by the alumni committee of which Glidden, '93, was chairman. Those present at the dinner were A. F. Bemis, E. B. Carney, N. P. Cutler, Jr., H. N. Dawes, F. N. Dillon, F. H. Fay, W. H. Graves, J. C. Hawley, A. L. Kendall, H. M. Latham, E. S. Page, C. M. Spofford, J. F. Tomfohrde, S. P. Waldron, and E. L. Wingate. At the concert there were present also S. N. Braman, W. W. Crosby, G. B. Glidden, and R. D. Reynolds.

Jesse B. Baxter is a member of the Republican State Committee of Massachusetts, representing the First Norfolk District. Baxter is vice-president of the Blue Hill National Bank in his home town of Milton, where he has been prominent in public affairs, having filled several town offices including that of chairman of the board of selectmen.

James Fairman Campbell of Philadelphia died on November 26, 1913. Campbell was with the class during the Freshman year, leaving to enter Lehigh University where he remained one year. He then took up law at the University of Pennsylvania Law School, graduating with the class of 1895. For eighteen years he was actively engaged in the practice of law in Philadelphia, in which profession he achieved marked success. He took an active interest in Republican politics and served for a time as special counselor for the Commonwealth of Pennsylvania. He was a member of the Pennsylvania Bar Association, Sigma Phi Fraternity, and of various clubs in Philadelphia and New York. In 1902 he married Miss Bertie M. Plunkett, and they resided at Oak Lane, Philadelphia.

William W. Crosby, '93, and H. M. Haven, '95, formerly of the firm of F. W. Dean, Incorporated, engineers at 53 State street, Boston, have themselves formed a partnership as consulting mechanical engineers under the firm name of H. M. Haven & William W. Crosby, with offices in the Marshall Build-

ing, 40 Central street, Boston. Several years after graduation, Crosby was engaged in teaching, first as a member of the instructing staff at the Institute, and later as professor of mechanical engineering and principal of the Lowell Textile school. After a short period spent as factory manager of the Brighton Mills, Passaic, N. J., he returned to Boston, joining the staff of F. W. Dean, and later going into partnership with the latter. Haven was associated with F. W. Dean for many years, and is recognized as a leading authority on refrigeration. The new firm will specialize in mechanical problems connected with industrial plants.—Frederic H. Fay, '93, Charles M. Spofford, '93, and Sturgis H. Thorndike, '95, have formed a partnership as consulting engineers with offices at 308 Boylston street, corner of Arlington street, under the firm name of Fay, Spofford & Thorndike. For nearly twenty years, Fay has been in the service of the city of Boston, for a considerable part of that time in charge of the design and construction of the city's bridges, and for the past three years he has been engineer in charge of the bridge and ferry division, and the commissioner representing Boston on the Boston and Cambridge Bridge Commission. He has also done a considerable amount of consulting engineering work in the New England States and in Canada.

Spofford spent two or three years after graduation with the Phoenix Bridge Company, and entered teaching in October, 1896, as a member of the instructing staff of the Institute. For four years he was head of the civil engineering department at the Brooklyn Polytechnic Institute, and in 1909 he returned to Tech to succeed Professor Swain as Hayward professor of civil engineering. For the past three years he has been the head of the department of civil and sanitary engineering, and for many years has carried on consulting work, both in Boston and New York.

Thorndike is a graduate of Harvard (class of '90) as well as of the Institute, and is well-known to many Tech men from the fact that for a time he was instructor in the civil engineering department. Most of his engineering work has been for the city of Boston, however, where for many years he was in the city engineer's office and its successor, the public works department, holding for about seven years the position of designing engineer in charge of design of bridges and other structures.—Myron Hunt, architect, of Los Angeles, California, is carrying out extensive alterations and additions at the well-known Glenwood Mission Inn at Riverside, California.

—Edward B. Randall is assistant superintendent of the American Biscuit Company, at San Francisco, his home address being 904 Green street, San Francisco, California. Randall writes:

I spent several years in the business world of Boston learning how much I did not know; then went to the National Biscuit Company in Chicago, and worked into a fine position through eight years' employment and still did not know how

much I did not know, and gave up my position and went to Idaho, mining. Learned a lot in Idaho—never saw the mine and went dead broke—and ran a small hotel in Salmon, seventy miles from a railroad, for a year. In 1908 I came out here to this company and have been here ever since. Here I made a fresh start, knowing nothing except to mind my own business. Now I am looking up again and getting square with the world. I have a fair position, good friends, a happy home and a charming wife. My life is happy and peaceful, and I am now sailing on a smooth sea, neither touching the high places nor the low places. Moral—"Know thyself."

—Arthur G. Reed is paying teller of the Bay State Trust Company, 222 Boylston street, Boston. He married in 1898 Miss Margaret J. Parsons, and they have three sons, their home address being 20 Lowell avenue, Newtonville, Mass.—James H. Reed is engaged in the manufacture of machinery, being the owner of the National Machine & Tool Company, at 253 A street, Boston. He was married in 1897, and has two children, a son and a daughter, and lives at 1106 Boylston street, Chestnut Hill, Mass. He is a member of the Theta Xi Fraternity and of the Exchange and Engineers Clubs of Boston.—Frank D. Richardson is with the American Telephone & Telegraph Company, 15 Dey street, New York. He married in 1911 Miss Ida M. Allen, and resides at 305 Decatur street, Brooklyn. Richardson writes:

Practically all the time since leaving the Institute I have been employed with the Telephone company. Most of the time I have been engaged in plant engineering work, with special reference to equipment and inside construction. I have taken every opportunity to travel that presented itself and have been able to take three short trips to Europe, and two to the West Indies and the Canal Zone.

—Harold A. Richmond is president of the American Emery Wheel Works, 325 Waterman street, Providence, R. I. He was married in 1896 and has one daughter. Richmond states:

I went to work for George F. Simonds, of Fitchburg, as draftsman. Shortly afterward business removed to Boston and sold to Henry M. Whitney, and was incorporated as the "Ball Bearing Company." I became successively superintendent and treasurer of this company, and resigned in 1897 to become president of the American Emery Wheel Works, which position I have held ever since. I traveled in Europe in 1909, in the interest of my company, visiting the large industrial works in Germany, Austria, Hungary, Switzerland, Italy, France and Belgium. My recreations are golf and autoing.

Richmond holds a membership in the American Society of Mechanical Engineers, the University Club, and the Agawam Hunt Club, and has written many articles for mechanical papers on ball bearings and grinding operations.

—Henry L. Rice is general manager of the Western United Gas & Electric Company and the Coal Products Manufacturing Company, at Aurora, Illinois. He married, in 1902, Miss Mary Cohn, and they have one daughter. On leaving the Institute he started with the Milwaukee Gas Light Company, as chemist, later becoming superintendent of distribution. In 1897 he went to the Gas Company at Norfolk, Va., as superintendent, later becoming general manager. He became general manager of the Western United Gas & Electric Company at Aurora, Ill., at the time of its

organization, in 1905; this company supplying gas and electricity to forty-five cities and towns just west of Chicago. In 1911-12 he directed the construction of a large by-product coke oven plant near Joliet, Ill., of which property he is also general manager. He is consulting engineer for several gas and electric properties. He has been engaged in a large number of expert examinations of utilities in the south and middle west. He is a member of the American Gas Institute, University Club of Chicago, Chicago Golf Club, and other professional and social organizations. He has written a number of papers delivered before professional societies.—Howard L. Rogers is first vice-president and treasurer of the Stone & Webster Engineering Corporation, 147 Milk street, Boston. He has been continuously with Stone & Webster since leaving the Institute; for the last few years on the executive end of their engineering and construction business. He married in 1907 Clara Phillips, and resides at 34 Spooner road, Chestnut Hill, Mass. They have four children, two daughters and two sons. Rogers served for thirteen years in the Massachusetts Militia, in all grades up to captain in the Field Artillery, and as major and lieut.-colonel in the Inspection Department. He is a member of the Technology Club of Boston, the Boston Athletic Club, and various yacht and canoe clubs.

—Samuel F. Rosenheim is proprietor of the Belle Hickey Manufacturing Company, a business of display fixtures, at 1334 Washington avenue, St. Louis, Mo. Rosenheim studied architecture at the Institute, which profession he followed until 1899, when he entered the glass business. He married in 1908 Miss Harriet Ellbogen, and they have two daughters. He is a member of the City Club, Westwood Country Club, and Men's Club of St. Louis. Before coming to the Institute he studied for a year at Washington University, St. Louis, and another year at the Columbia School of Mines.—Edward S. Sanderson is engineer of sales of the Scoville Manufacturing Company, of Waterbury, Conn. In 1894-95 he worked as apprentice and draftsman with the Kendrick Manufacturing Company, Carbondale, Pa., and then went to the Illinois Steel Company, Joliet, Ill., where he remained until 1898, holding the positions of assistant chemist, assistant metallurgist, metallurgist, and night superintendent of plant. In January, 1898, he went to Philadelphia as superintendent of the Pennsylvania Globe Gas Light Company, and later was superintendent of the Kitson Electric Light Company as well. From 1903 to the present time he has been with the Scoville Manufacturing Company of Waterbury. Regarding his work with this company he writes:

I have no title but have been successively in charge of branches of manufacturing production and sales. Since 1898 I specialized in brass work, and particularly in relation to lighting devices, gas, electric, oil, etc. I have taken out numbers of minor patents along these lines. I have not had time for extended amusements but take the usual enjoyment in social life, golf and tennis, and travel about considerably, for business mostly. I have been abroad only once. My principal

affiliations are with Cornell. My one year at Tech hardly measures up to my four at Cornell, but I do remember many good friends, some of whom I occasionally see and hope to meet again.

Sanderson was with the class during our freshman year, and then went to Cornell, where he received his M. E. degree in 1894. He is a member of the American Society of Mechanical Engineers, Sigma Phi Society, Cornell University Club of New York, Cornell Alumni Association of Connecticut, Country Club of Waterbury, University Club of Hartford, Graduate Club Association of New Haven, and other organizations. He married in 1903 Miss Fredrika Catlin, and has one son.—Howard R. Sargent is managing engineer of the wiring supplies department of the General Electric Company, Schenectady, New York. He says:

I am engaged in keeping 2,000 employees busy manufacturing the best line of electrical wiring supplies to be had on the market, at the same time trying to remember that the other fellow has a right to live. I have traveled in England, Holland, Belgium, France, Switzerland, Germany, United States, Canada, Bermuda, etc., and my principal amusements are golf, billiards, bridge and automobiling. My military career consists of my M. I. T. service as a freshman, a fierce, fearless and fiery warrior in the drum corps.

He is a member of the American Institute of Electrical Engineers, the Masons, the Mohawk Club, the Mohawk Golf Club, Sons of Jove, etc. He married in 1898 Miss Emily E. Furman and they have one daughter.—William H. Sayward, Jr., is private secretary to his father, the secretary of the Master Builders' Association, at 166 Devonshire street, Boston. After his graduation from the Institute in 1894, Sayward entered the Harvard University Medical School, receiving his M. D. degree in 1899. For four years he practiced medicine in Dorchester, and in the summer of 1903 was physician at the Lookout Club, Isle au Haut, Maine. In 1903 he removed to Wayland, Mass., where he practiced medicine until 1908, with the exception of one year spent as a private student in the biological department at the Institute. Since 1908 he has held his present position. In 1894 he made a trip to England and the Continent. As for amusements he reports:

Amateur dramatics, tennis (little of late), and vegetables in their native element.

He is a member of the Massachusetts Medical Society, and a past member of the Boylston Medical Society. He served as a member of the First Corps of Cadets, Massachusetts Militia, from 1895 to 1898. In 1900 he married Miss Mary Parkman Robbins, and they have four children, three sons and a daughter.—Frederick D. Smith has been with the Metropolitan Sewerage Commission of Massachusetts since graduation, and at present is chief engineer of the Metropolitan Sewerage Works, at 1 Ashburton place, Boston. He married in 1884 Miss Sarah J. Chase, and they have one daughter and one son. Their home address is 25 Waverly street, Malden, Mass.—Walter Redd Staples is judge of the Corporation Court of the city of Roanoke, Virginia. Staples began his career as

an engineer on the Mississippi & Illinois Canal, in the Engineer Corps, U. S. A., and from 1894 to 1899 was inspector of Public Service in the Interior Department, Washington, D. C. During this time he studied law at the National University, where he received the degree of B. L. in 1899. He has practiced law since that date, and was elected by the Legislature of Virginia, judge to the Corporation Court at Roanoke, for the term of eight years beginning February 1, 1909. He states:

The only thing worth mentioning is that I presided at the trial of the Allens, who were convicted for the murder of judge, sheriff, Commonwealth's attorney, and others, at Hillsdale, Va., on March 12, 1912, I having been designated by the governor of Virginia to preside at these trials. I reached Hillsdale March 13 and the last case was concluded December 12, 1912.

He married in 1902 Miss Olivia B. Trout, and they have two children. Staples writes:

I met Albert Lee Gortzman in Washington, D. C. last winter. He was looking young and prosperous.

—Fred B. Studley who, on account of ill health, was obliged to give up all work in 1895, has so far regained his health as to again enter business at his home at North Duxbury, Mass. In 1894 he married Miss Susie A. Magoun and they have one child.

—Walter I. Swanton is assistant engineer in the United States Reclamation Service, his home address being 1464 Belmont street, Washington, D. C. Regarding his career he writes:

I was first with the Boston & Albany Railroad, as rodman, bridge draftsman and inspector of bridges and masonry, until the fall of 1899. Then with the Union Bridge Company, Athens, Pa.; at the Norfolk Navy Yard; Edge Moore Bridge Works; League Island Navy Yard, Boston and Brooklyn Navy Yards; in the Bureau of Yards and Docks until 1903. For the two following years I was in the supervising architect's office of the Treasury Department, in Washington and in Chicago. In 1905 I entered the United States Reclamation Service, where I am at present, at first being stationed at Belle Fourche, South Dakota, and later at Washington, where my present duties relate to cost data and statistical and editorial work.

In 1904 Swanton married Miss Lucy C. Ross and they have two daughters and one son. He is a member of the Washington Society of Engineers, Masonic Fraternity, and the Tax Reform Association of the District of Columbia.

—Charles W. Taintor is a member of the firm of C. W. Taintor Company, dealers in investment securities, at the Sears Building, 199 Washington street, Boston. From 1893 to 1900 Taintor was with the New England Telephone Company, with the exception of sixteen months in 1897-98, when he made a trip around the world. From 1900 to 1904 he was connected with the General Electric Company, spending two years at Schenectady and two years in the Foreign Department at the London office. Since 1905 he has been engaged in financial business, first as a bond salesman for William A. Read Company, later as manager of the Bond Department of

Tucker, Hayes & Company, and finally opening his own office. In 1909 Taintor prepared and published "Analysis of the Earnings of the United States Steel Corporation," a rather remarkable statistical work, which brought out in compact form a large amount of information about the affairs of that corporation. In 1905 Taintor married Miss Caroline Tileston Hemenway, and their Boston home is at 149 Beacon street. Their family consists of two daughters. Taintor is a member of the Exchange Club, Union Boat Club, Engineers Club, and New Riding Club, all of Boston.—Alfred C. Thomas is telephone engineer, with the New York Telephone Company, 15 Dey street, New York. Ever since graduating from the Institute he has been connected with the engineering departments of different Bell Telephone Companies, in and about New York. He is a member of the American Institute of Electrical Engineers and the New York Electrical Society. He is still single and lives at 292 Ryerson street, Brooklyn.—Percy H. Thomas is a consulting electrical engineer at 2 Rector street, New York City. For ten years, beginning in 1893, Thomas was with the Westinghouse Electric Manufacturing Company, of Pittsburg, where he specialized on high tension matters, devoting much time to research and making several inventions. In 1896-97 he made a trip to Brazil in connection with a power transmission plant. From 1903 to 1907, he was chief electrician of the Cooper-Hewett Electrical Company, where he did much toward the development of the mercury vapor lamp. From 1907 to 1911 he was senior partner in the firm of Thomas & Neall, electrical engineers of New York and Boston, on general electrical engineering work, but making a specialty of high tension work. Since the latter date he has been in independent consulting practice along same lines in New York City. Thomas has been very active in the American Institute of Electrical Engineers, having served as chairman of the Meetings and Papers Committee, twice a member of the High Tension Transmission Committee; a member of a committee on Constitutional amendments, chairman of the board of examiners, and is representative of that society on several joint committees with other societies. In the government of that society he has served on the board of managers, and as vice president. Besides being a fellow of the American Institute of Electrical Engineers Thomas is a member of the Engineers Club, the Technology Club of New York, the Delta Upsilon Alumni, the Delta Upsilon Club of New York, the Country Club of Upper Montclair, New Jersey, where he resides, and is a director in the Montclair Coöperative Society. Thomas married in 1900, Miss Isabelle Mary Patten, and they have two daughters.—Charles A. Tripp is a member of the firm of McMeans & Tripp, consulting electrical and mechanical engineers, 710 Majestic Building, Indianapolis, Indiana. For three years after graduation Tripp was with the Westinghouse Electrical & Manufacturing Company, of Pittsburg, and then for two years

was manager of the Municipal Light & Power Plant, of Hudson, Mass. From 1898 to 1903 he was engineer for the Bemis Brother Bag Company, of which A. F. Bemis, '93, is now president. In the latter year he entered consulting practice as at present, his firm doing a general consulting business on industrial plants, handling both buildings and equipment and specializing on canning plants. Tripp married in 1904 Miss Elizabeth M. Wright. He is a trustee of the Indiana Engineering Society, a member of the Engineering Committee of the Indianapolis Chamber of Commerce, secretary of the Indianapolis-Lafayette Section of the American Institute of Electrical Engineers, member of the Indiana Sanitary and Water Supply Association, and of the Woodruff Club. He has written articles on smoke prevention for the Chamber of Commerce, on individual electric drives for textile mills, on pneumatic street cleaning, and reports of the Electrical Engineering Committee of the Indiana Engineering Society.

1896.

CHARLES E. LOCKE, *Sec.*, Mass. Inst. of Tech., Boston, Mass.
J. ARNOLD ROCKWELL, *Asst. Sec.*, 24 Garden Street, Cambridge,
Mass.

"Johnnie" Rockwell is back on the job as medical adviser at M. I. T. and private practitioner in Cambridge, after spending his regular fall vacation of five weeks at Harriman, among the mountains of Tennessee. He came North via boat from Savannah and had the opportunity to spend the day with Smalley, who is in charge of the laboratory of the Southern Cotton Oil Company. Smalley has developed a model laboratory and has introduced some very efficient methods, so that the large number of daily samples of the various products are handled very systematically and expeditiously. As an example of Smalley's improved efficiency, it may be noted that he got Rockwell out of town at 7 p. m., whereas last year, under similar conditions, it was 11 p. m., before he could get Rockwell on the train.—The Boston *Herald* of April 17, contained an excellent cut of Charley Gibson, the new member of the Boston Park and Recreation Commission, and devoted a three column article to a description of his work, especially along the line of landscape architecture. Since he was graduated, Gibson had an opportunity, during his foreign residence, to study art and architecture in England, France, Germany and Italy. His summer home is at Nahant where he has developed a beautiful garden. He also has made some contributions to the literature in the form of books and magazine articles along the line of fiction. His appointment is particularly pleasing, as it is based entirely on merit, and is in no sense political.—George Haskell Smith arrived October 9, 1914. His father, F. Haskell, is superintendent of the plant of the Federal Rubber Company at Cudahy, Wis.—

The following is taken direct from the *Baltimore Star*, July 11, 1914:

Henry Gardner, recently appointed assistant superintendent of the Baltimore and Ohio Railroad Shops at Mount Clare, has had an interesting career. Mr. Gardner was born in Salem, Mass., in 1872, and was educated in the grammar and high schools and at the Massachusetts Institute of Technology in Boston, receiving the degree of mechanical engineer. From 1896 to 1899 he served as an apprentice in the Boston and Maine shops, Boston, and from 1899 to 1904 he was with the same road at Concord, N. H., as shop draughtsman, shop instructor and assistant master mechanic. He was then for one year erecting foreman of the American Locomotive Company at their Pittsburgh works, and one year with H. K. Porter Company of Pittsburgh. From 1906 to 1908 he was chief draughtsman and apprentice instructor of the Pittsburgh and Lake Erie, and from 1908 to 1912, he was assistant supervisor of apprentices of the New York Central and Hudson River Railroad, the position he left to come to Baltimore and Ohio as assistant superintendent of shops.

—Stephen DeM. Gage, for the last eighteen years biologist at the Lawrence Experiment Station, Lawrence, Mass., has resigned to become chief chemist to the State Board of Health of Rhode Island.—Lucius Tyler, as noted in a previous issue of the REVIEW, has gone into the business of manufacturing vacuum cleaners, under the name Bantam Manufacturing Company, Cambridge, Mass. Tyler's aim has been to produce a high grade, light weight, medium priced cleaner, of the carpet sweeper type, making use of a high speed suction fan mounted direct on the shaft of an upright electric motor. His ingenuity has produced a cleaner which shows some advantages over other cleaners of the same type. The total weight is only seven and a quarter pounds against eleven or twelve pounds for others, and at the same time the capacity with the delivery bag in place amounts to 136 cubic feet of air per minute against 100 feet in some other machines. Tyler has promised to give some other details of power consumption, air velocities at the nozzle, etc., which are particularly interesting to readers of a scientific turn of mind.

Address Changes

William T. Dorrance, 2 Hathaway St., Jamaica Plain, Mass.—L. E. Emerson, 30½ Shepard St., Cambridge, Mass.—Frank E. Guptill, 147 Milk St. (Stone & Webster), Boston, Mass.—Harry H. Smith, care of Smith & Bassett, 36 Pearl St., Hartford, Conn.—Samuel F. Thomson, 314 East 21st St., Brooklyn, N. Y.—Charles F. Wray, 109 West Ave., Rochester, N. Y.—Conrad H. Young, Armstrong Cork Company, 50 Church St., New York, N. Y.—Stephen DeM. Gage, 310 State St., Providence, R. I.—Minor S. Jameson, Woodstock, Ulster County, New York.—J. E. Lonngren Murray Wire Works, Verona Ave., Newark, N. J.—Reginald Norris, 511 Shreve Building, San Francisco, Cal.—Frank A. Thanisch, care of H. F. Thanisch, 3305 Washington St., Jamaica Plain, Mass.

1898.

A. A. BLANCHARD, *Sec.*, Mass. Inst. of Tech., Boston, Mass.

The Fifteen-year class book was completed and distributed to the members of the class late in the summer. The committee thinks it shows a notable record of achievement of the members of the class, and that it is a credit to the class and to the Institute. The secretary has received many letters in praise of the book. Up to a week before this writing the money collected but one-half covered the cost of collecting statistics and of publication and the committee stood some \$400 behind hand. The secretary thereupon sent personal appeals to those who had made no response. The following letter, accompanied by five dollars, came as one reply and the secretary finds so much to sympathize with in this point of view that he gives the letter in full:

I have as much pride as anyone in the welfare of the class, but times are hard and I have had a great deal of sickness in my family, and have been put to great expense. Even five dollars means self-denial on the part of those who are near and dear to me, but since you put it as you do, I enclose the same herewith. I am not trying to shirk responsibilities, but I have little sympathy with the feeling which has permeated the Institute during the past few years, that a man "must give until it hurts," entirely irrespective of the burden which he may impose upon those to whom he owes the duty of protection and support, and whom the ardor of raising money seems entirely to ignore.

The present secretary pledges himself that if he still holds the office at the time of the twentieth class reunion, he will not allow a bunch of optimistic enthusiasts without much personal responsibility in the matter to vote another class book. In other words, every five years is too often. When we have been out twenty-five years—and may that time not come too quickly—we will certainly want another book and one which will be in keeping with the achievements of the class.

We hear that Frank B. Heathman, although he sent no data for the class book, is prospering. He married Grace L. Brooks (Smith College '97) and has three children. Home address is 1022 Grand avenue, Dayton, Ohio.—The name of R. C. Prosser was furnished by the alumni office among the list of deceased and so printed in the book but we learn from another classmate to our joy—but to our chagrin at the mistake—that he is very much alive at Ridge and Hazel avenues, Webster Groves, Mo.—Moral: Don't get completely out of touch with the class organization but write the secretary once in a while about yourself and give him items for the class news in the *REVIEW*.—The following pleasing item concerns one of our supposedly confirmed bachelors.

—Mr. and Mrs. William Sherman Gibson announced the marriage of their daughter Grace Gene to Mr. William Daniels Blackmer, on Wednesday the 10th day of June, 1914, Los Angeles, California. At home Kensington Apartments, Witmer and Ingram streets, Los Angeles, California.

Thayer, who is assistant professor of architectural design at the Carnegie Institute of Technology, has just sent the publisher, D. Van Nostrand Company, the final proofs of the second volume of his work on "Structural Design." This considers I-beam bridges, plate girders, viaducts, elevated railroads, riveted and pin-connected bridges, mill buildings, high office buildings, miscellaneous buildings, stand-pipes, and elevated tanks.—Everett N. Curtis writes to announce a baby girl, Polly Josephine, born August 24, 1914. That Curtis is achieving success in the law is shown by the clipping from the Rockland (Me.) *Courier-Gazette* of July 7, 1914:

The news of the recent arguments in the case of United States v. United Shoe Machinery Company, a petition brought under the Sherman Anti-Trust Act for the purpose of dissolving this company as a combination in restraint of trade, in which the Government appears to have had the worst of the argument, brings to mind the efforts of Everett N. Curtis, Esq., a Knox county boy, in the well-known case of Harry E. Cilley v. United Shoe Machinery Company brought under the trust act to recover one million dollars in which Mr. Curtis succeeded after a long fight in defeating the defendant company on demurrer.

Mr. Curtis comes from Camden and was educated in its schools. He first studied law with Littlefield at Rockland, Me., and was graduated from the Massachusetts Institute of Technology in 1898 and from the Boston University Law School in 1900. For several years he was at the head of the office staff of Judge Charles F. Perkins of Brookline and now has his office at 84 State street, Boston, where he has a large and successful practice. He was appointed receiver of the Wonderland Company, the large amusement enterprise at Revere, Mass., 1911-1912. He is attorney for Mrs. George E. Williams, whose husband was the agent of the Connecticut Life Insurance Company, and of wide notoriety. He was senior counsel for the heirs in the Mary Retz Will Case, and has appeared in other important litigation both in the state and federal courts.

The case of Mr. Cilley was prosecuted by Mr. Curtis single-handed against the United Company, represented by the ablest legal talent of the country, and was the first case brought against the company under the Sherman Anti-Trust Law in which its contentions on the law were overruled. Mr. Curtis differs from the Government attorneys quite materially, and particularly as to their theory as to the law governing the patents owned by the United Company, and presents quite a different situation upon the facts so that it is not impossible that the Government may not be able to prevail on the law notwithstanding the decision in the Cilley case.

1899.

W. MALCOLM CORSE, Sec., 106 Morris Avenue, Buffalo, N. Y.

The plans for the class reunion have been well talked over and several members of the class have visited Miles Sherrill's summer home in Marshfield, Mass., and inspected the quarters that he has kindly offered for the reunion. The combination of scenery, with ocean bathing, golf, tennis and a general good time, is certainly going to make the reunion a great success.

There will be further announcements regarding it when the exact date is set. The probable time will be the early part of June, so save this time until more definite announcement can be made.

The following letter from Addicks, Douglas, Ariz., is interesting:

Replying to your letter of July 6, in which you ask what I am doing in Arizona, I have taken charge of an extensive investigation for Phelps, Dodge & Company, inquiring into the possibilities of copper leaching at their various properties in the Southwest. We have a research force at work and a fifty-ton test plant in partial operation and the work is very interesting. The hydrometallurgy of copper is just entering upon its legitimate development and I look for large extensions in this direction.

Gillson reports in a letter of July 31, that he caught a 16-pound muskellunge in northern Wisconsin on July 5. He had a splendid time on his vacation and reports good business for the first half of the year.

We regret to announce the death of Edward Johnson, Jr., on August 8, 1914. We are glad, however, to be able to publish a short biography, which fully describes his work.

Mr. Edward Johnson, Jr., son of the late Edward and Georgiana (Miller) Johnson of Boston, Mass., and Belfast, Me., passed away on August 8, 1914, after a long and painful illness, at the family summer residence, "The Homestead," in Belfast, and the remains were placed in the Johnson tomb there. For the past eight years Mr. Johnson has been a resident of Los Angeles, Cal., where he had taken a very prominent part in meeting such changes in the various municipal plants and public works as the recent rapid growth of the city has required; and his death removes from Los Angeles a citizen who had in his comparatively short life of thirty-seven years accomplished much for the welfare of his fellows, and whose future career gave every promise of being a brilliant one. He was born in Boston, Mass., December 4, 1876, and prepared at the Hale School and the Hopkinson School, both in Boston, for the Massachusetts Institute of Technology, from which he was graduated in the class of 1899, Course 1, as a civil engineer. While at the Institute he was a member of the Civil Engineering Society, L'Aveur, Deutscher Verein, Hammer & Tongs, the Yacht Club, Mandaman Club, and Technology Club. Immediately upon receiving his degree of bachelor of science, Mr. Johnson made his only visit to Europe. Returning in the early autumn he entered upon the practice of his profession in which he was constantly engaged until the time of his last illness.

He had been connected with a number of important engineering projects, and had risen rapidly in his profession, and at the time of his death was becoming a recognized authority as a consulting engineer. He had held various positions, as follows: 1899-1900, hydraulic engineer and surveyor with the Essex County of Lawrence, Mass.; 1900-03, hydrographer, U. S. Hydrographic Service in the U. S. Navy, being engaged along the coast of Lower California on board the U. S. S. *Ranger*; 1903-06, engineer in charge, U. S. Reclamation Service at Chicago, Ill., and at San Francisco, Cal. In 1906 he resigned from the government service to engage in engineering work on the Pacific Coast, under the firm name of Johnson & Lindley, consulting engineers, with headquarters at Los Angeles, Cal. In 1911, he was appointed chairman of the Los Angeles Aqueduct Investigation Committee. He later became a member of the Los Angeles Harbor Commission, and on January 1, 1913, he was appointed one of the three members of the Los Angeles Board of Public Works, by which the affairs of the city of Los Angeles are administered much as by a commission form of government. It was under this board that the Los Angeles aqueduct, which brings water to the city for domestic, irrigation and power-plant purposes, from Owens Lake and Owens River, two hundred and fifty miles away, and is one of the longest and most remarkable structures of its kind in the world, was built. In addition to the supervision of the work in the field, which involved the expenditure of twenty-four millions of dollars, he had under him an office force of from seventy-five to one hundred draughtsmen and clerks. For a period of a little over a year, prior to his death, it had been difficult for him to carry on his work owing to ill health, though he did not call a halt until last November, since when, in spite of a brave fight on his own part, assisted by the most noted medical and surgical specialists in the country, he grew steadily worse.

Mr. Johnson was a member of the University and California Clubs of Los Angeles and of the Country and Cuyamaca Clubs of San Diego, Cal.

His religious belief was that of the Protestant Episcopal Church, and he was a devout and tireless worker in the parish of St. Johns, Los Angeles, of which church he was a vestryman.

In his political affiliations he was a Republican, though he had the backing of the Progressive party in the recent elections. In his official capacity he was independent of all parties.

Edward Johnson, Jr., married in San Diego, Cal., November 25, 1903, Gertrude Ellen Nukerck Clark of that city, who, with their only child, Gertrude Louise, born June 30, 1905, survives him.

Like many of his ancestors he was a man possessed of an unusual physique. When a student at the Institute of Technology he was selected as one of the six pallbearers who carried the casket containing the remains of the late President of the Institute, General Walker, on their shoulders above the heads of the crowd. During his only visit to London, in 1899, his commanding presence attracted the attention of an officer of the Queen's Guards, who, taking him for a Canadian on a trip to the capitol, followed him, made his acquaintance and tried to induce him to enlist in that famous organization of stalwart men.

Of Mr. Johnson's character and exemplary life, both in its public and private relations, much might be said. He was the soul of honor, upright in all his dealings, straight-forward and direct, and singularly free from guile and vice of every kind. As a public official he was above reproach. In the awarding of the large contracts, the placing of which went with his position, his favor could not be bought, any more than could his opinion as a consulting engineer. In his tastes and daily life he was simple and lovable. He was slow and deliberate in forming his opinions and positive and persistent in asserting and adhering to them. His loyalty to his friends was strong. He had a dry sense of humor, which never deserted him, and he retained the full use of his faculties up to the last. Numerous letters and newspaper clippings, which have been received both during his illness, and since his death, bear ample testimony to the high esteem in which he was held in southern California, the home of his adoption. The City Council of Los Angeles and the Los Angeles Board of Public Works both adopted resolutions of respect and condolence at the time of his death, and the latter ordered the flag on the City Hall placed at half mast for three days.

1900.

WILLIAM R. HURD, 2d.

RICHARD WASTCOAT.

PERCY R. ZIEGLER.

INGERSOLL BOWDITCH, Sec., 111 Devonshire Street, Boston, Mass.

A very interesting letter had been planned to start the season with, but it was discovered too late that the author had not been allowed time enough in order to do it justice. The class will not lose it, however, as it has only been postponed until the next number of the *REVIEW*.

The most interesting piece of class news is Neall's marriage to Miss Martha Whittelsey Gray which took place on Saturday, September 26, at Chestnut Hill. Besides Gibbs who had the service, and Graff who was an usher, the class was represented by Bowditch and Cutting. A reception was held in the house which Neall and his wife will occupy this winter. It was rumored that their honeymoon was to be passed at Neall's farm in Scituate.—Cards have been received announcing the marriage of Warren C. Tudbury and Miss Ethel Putnam Wheeler, on Sep-

tember 22 at Berkeley, Cal. After December 1 they will be at home at 1420 Lomita avenue, Glendale, Cal.—Herman R. Hunt has been transferred from the Portsmouth to the Boston Navy Yard, and it is hoped that he will join us again at our informal meetings. His address is 5 Myrtle street, Stoneham, Mass.—Wentworth is still working on his crude oil engine and the latest developments seem very encouraging.—To Bowditch's great surprise and delight, Dick Wastcoat is still on the water wagon. His reply for news about himself was as follows:

Am just sticking around town, earning an honest living and tending to what business there is. I make myself believe that I am having a glorious time doing it. Have not had a drink since you bought me the last cocktail.

Bowditch has not seen Dick for months, and his memory does not go far enough back to recall when he bought him a cocktail.—G. G. Heginian seems to be the inventor of the class. Several years ago he invented some short method of determining the position of slope stakes, and now he has just invented a sort of circular slide rule which is fully explained in the August 27 number of the *Engineering News*. If he keeps on, he may develop some universal machine by which students may, by inserting certain numbers, grind out their answers correct to hundredths. According to a well-known professor, this seemed to be the highest aim of most students.—A three days' outing at Neall's farm was planned for the last part of August, but unfortunately a date was set which did not allow enough of the class to attend, and consequently it had to be given up, much to Neall's disappointment. He had grown a lot of vegetables to feed the fellows and had planned to give them a great time. He also wanted to show off his new place which is said to be most attractive. Owing to the expense of arranging a camp and seeing that the fellows were made comfortable it was necessary to have at least fifteen fellows in order to keep within reasonable bounds the amount each would have to pay. Only six were able to go.—Robert S. Blair of Blair & Nathan, patent lawyers, has been acting as attorney for James F. Doran, '03, in a litigation concerning the patents on hat crown pouncing machines. In his investigations concerning this case Blair has learned a great deal about the hat industry. Perhaps he will be glad to tell the class what the style for next year's hats is going to be.—Bowditch spent his vacation on an automobile trip, with his wife, to Quebec and Montreal via Maine. He took a camping outfit and slept out about half the nights. Most all of the midday meals were taken in some pretty spot along the road. Although he got through safely and had only one puncture, he does not advise anyone to take this trip for at least two years. A National Highway is being built from Montreal to Halifax and several stretches are under construction. If the road is not like a plowed field, it is covered with broken stone, which is of no benefit to the tires, and cannot be avoided. This sort of a road gives experience

in driving a car which can be obtained in no other way. Unfortunately Bowditch got home before the war broke out and had no exciting stories to tell.

The following address changes have been received:

Robert S. Blair, Blair & Nathan, 55 Liberty St., New York.—Miss Clara I. Durgin, 12 Concord Ave., Belmont, Mass.—William B. Hough, 1336 Monadnock Building, Chicago, Ill.—F. C. Lincoln, Mackay School of Mines, Reno, Nev.—Willard W. Stone, 1421 Harvard St., Washington, D. C.

1901.

ROBERT L. WILLIAMS, Sec., 8 Lake Street, Brighton, Mass.

In a recent letter to the secretary Solon J. Stone writes:

I have become associated with the Georgia Engineering and Construction Company as vice-president and shall have charge of this company's engineering and construction work. Our offices are in 1301-2-3 Empire Building, Atlanta, Ga. This company has been doing an extensive general construction business in the Southern States, but with my advent into it, we shall eventually specialize in the engineering and design of industrial and manufacturing plants, also doing the necessary construction work from our designs. I shall be glad to have a call from any Tech men who may find themselves in this city and will try to make them feel at home.

—Mr. and Mrs. William G. Holford announce the arrival of William Gordon Holford, Jr., in Portland, Ore., July 30, 1914.—In the society events of the *Boston Post* of October 11, with an excellent picture, appeared the following item:

Mrs. John T. Scully of Brighton, who was a matron at the An-der-See Assembly at Riverbank Court last night, on the holiday will entertain a circle of her young friends who participated in the dansant at her summer home, Allerton.

—Norman A. Dubois, Ph. D., formerly dean of the College of Pharmacy in Western Reserve University, has recently come to Boston to take charge of the department of metallurgy in the Wentworth Institute. He taught for some years in New York University and afterwards was head of the department of chemistry in the Case School of Cleveland. The Wentworth Institute has just opened its fourth year with the largest enrollment in its history.—William J. Sweetser recently called on the secretary at his office. He had just spent the summer at his camp on Lake Winnipesaukee and was en route to Cleveland, Ohio, where he is assistant professor of mechanical engineering in the Case School of Applied Science.—Henry R. Gibson, who is chief engineer for the National Metal Molding Company, of Ambridge, Pa., writes that he has six youngsters, four girls and two boys.—Willard W. Dow is assistant treasurer of the Stone & Webster Engineering Corporation.—A. A. McInnis is chief engineer for Patrick McGovern & Company of New York City, who are constructing Section 9 of the Lexington avenue subway in New York and a section of

the barge canal at Mechanicsville, N. Y., the total of the two contracts being about four million dollars.—Farnum F. Dorsey is a patent attorney and member of the firm Davis & Dorsey, Rochester, N. Y.—The following recent address changes have been received:

Horace Johnson, care of C. Brewer & Company, Hilo, Hawaii.—F. W. Puckey, 134 South La Salle St., Chicago, Ill.—A. P. Merrill, 401 Monadnock Ave., San Francisco, Cal.—Elzear J. Proulx, Willimansett, Mass.—Ralph H. Stearns, Hotel Puritan, Boston, Mass.

1902.

F. H. HUNTER, *Sec.*, 281 Park Street, West Roxbury, Mass.
J. ALBERT ROBINSON, *Asst. Sec.*, care Underwriters' Bureau of
New England, 141 Milk Street, Boston, Mass.

Charlie Kellogg has been appointed manager of the Mississippi River Power Company at Keokuk, Iowa, and assumed his new duties on October 1. As this is the biggest power plant in the world comment seems unnecessary.—Hamblet spent four months last spring in California supervising the installation of a plant for the Chemical Engineering and Operating Company. He returned to Massachusetts the latter part of June, just in time to spend some exciting hours at the great fire in Salem. Fortunately his home escaped, but not by a wide margin. Since then Hamblet has moved to Winchester, where his residence is 4 Maple road. Oscar Newman Hamblet arrived there on the 20th of last August.—Our other classmate living in Salem, Burton Philbrick, was also fortunate enough to escape in the great fire, but is in no hurry to repeat the experiences of a very anxious twelve hours.—Matthies, at Antwerp, so far as we know, is the only classmate in the war zone in Europe. Any news from him will be most interesting reading.—Archie Gardner has completed a dam at Kent, Ohio, for the Akron water works. He will probably spend the fall in New York with home address at Babylon, L. I.—Trowbridge is marine superintendent for the Emery Steamship Company, and the Shawmut Steamship Company, which operate lines from Boston to the Pacific Coast via. the canal. His office is at 114 State street, Boston.—Finneran has bought himself a house at 113 Wren street, West Roxbury, within a stone's throw of the class secretary; no stones have yet been thrown, however.—Harry Strand is building a fireproof tile house in Newton Highlands.—Mague is building a house on Washington street, West Newton, near the Woodland Park Hotel.

Our class phalanx of handsome bachelors suffered a severe loss on September 17, when Cecil Annett was married to Miss Helen Arnold, Smith '07, the daughter of Mr. and Mrs. Moses Arnold of North Abington, Mass. The wedding took place at the summer camp of the bride's parents near North Abington; the wedding

trip took the happy couple to Long Lake, Me., and, after December 1, they will be at home at 50 Morningside Drive, New York.

Finneran lost his little son, Thomas, when the boy was six months old in March, 1912, but in July, 1913, a daughter, Pauline, was added to his family.—Anne Vaughan, who arrived in Worcester, Mass., on October 2, 1913, is another baby not previously reported.—The last addition to our "Proud and happy fathers" is the class secretary, Alice Thurston Hunter having arrived on October 21, 1914.

1903.

MYRON H. CLARK, *Sec.*, 1790 Broadway, New York, N. Y.
R. H. NUTTER, *Asst. Sec.*, Box 272, Lynn, Mass.

A few of the '03 men were able to get together at the annual Tech night at the Pops, June 9. They were Scholtes, Sears, Hoxie, Clark, Babcock, and Pulsifer. Pulsifer, by the way, is an instructor in metallurgy at the Armour Institute of Technology, Chicago.—Every one will be sorry to hear that Ernest Comer's home was burned in the Salem fire last June. He is planning to rebuild at once.—After three years of litigation, James F. Doran of Doran Brothers, has finally been granted two patents on hat crown pouncing machines. As there were nearly 200 other claims on the machines, Mr. Doran is certainly to be congratulated.—Ralph N. Eaton is engineer in charge of production and distribution of power for the Shore Line Electric Railway Company, with headquarters at Norwich, Conn.—From Chicago comes the news that Mayor Harrison has appointed Montague Ferry as commissioner of public service, a new department recently created in the city government.—M. H. Clark is now manager of footwear factories for the United States Rubber Company with office at 1790 Broadway, New York.—P. J. Kearney has been appointed electrical engineer of the New York, New Haven & Hartford Railroad.—LeRoy B. Gould announces the arrival of a daughter, Dorothy Winslow Gould, on July 30, 1914; as does also our assistant secretary. Constance Nutter was born July 23, 1914, at Swampscott. As for myself, I have a boy—Philip Farnum Clark—born August 29.—In March the engagement was announced of Miss Jennie Brackett of Cambridge to Isaac T. Haddock of Tiverton, R. I. Their wedding took place August 30, and after the honeymoon Mr. and Mrs. Haddock will live at 175 Hancock street, Cambridge.—Albert Haskell also joined the ranks of the benedicts on September 16 when he was married to Miss Margaret L. Weatherston, Smith '12. Their new address will be 172 Gallatin street, Providence, R. I. They will spend the winter in San Domingo.

Address Changes

F. C. Babcock, 390 Manchester St., Manchester, N. H.—Mr. S. R. Bartlett, 60 Gardner St., Hingham, Mass.—M. H. Clark, 1790

Broadway, New York City.—Edwin G. Goodwin, 403 E. Fourth Ave., Knoxville, Tenn.—C. M. Joyce, care of J. Merritt Matthews, 50 E. 41st St., New York, N. Y.—Frank P. Montgomery, 15 Clinton St., Newark, N. J.—H. I. Morse, Odd Fellows Temple, Cincinnati, Ohio.—Mrs. George H. Noone (formerly Ava M. Stoddard), 18 Burr St., Jamaica Plain, Mass.—Charles H. Porter, 354 Congress St., Boston, Mass.—Oliver P. Scudder, 60 Wyman St., Brockton, Mass.—Thomas E. Sears, care of Gilmour & Rothery, 120 Water St., Boston, Mass.—John W. Regan, Charlestown High School, Charlestown, Mass.

1904.

HENRY W. STEVENS, *Sec.*, 39 Boylston Street, Boston, Mass.
AMASA M. HOLCOMBE, *Asst. Sec.*, 510 Pine Street, St. Louis, Mo.

Owing to the war in Europe, or some other reason, there is a great scarcity of news to be chronicled at this time.

Along the latter part of September, H. S. Kendall was married to Miss Mason of Baldwinsville, Mass., and a post card received by the secretary announced their presence in the Grand Canyon on a most enjoyable trip.—Earlier in the summer "Tammy" Rockwood and Miss Elizabeth T. Polhemus, of Newton Centre were married and spent their honeymoon touring Vermont and New Hampshire in a six cylinder "Studebaker." It looks as if "Tammy" has succeeded in making an automobile out of concrete, at least figuratively speaking.—The following epistle from A. M. Holcombe was received by the secretary early in October:

Marshall Maynard Holcombe, born September 24, 1914, at St. Louis, Mo. Weight 9 $\frac{1}{4}$ pounds. This makes my second.

Congratulations to the assistant secretary!

—On October 20, 1914, Galusha delivered an interesting illustrated description of the construction of the great hydro-electric plant at Keokuk, before the Boston Edison Section of the National Electric Light Association, the meeting being held at the Engineers Club. Don proved to be some lecturer and all present enjoyed his remarks exceedingly.—Parker has changed his place of residence, going from his boyhood home in Reading to the town of Norwood, Mass. Incidentally, the secretary has appointed Parker as the '04 member of the committee on the Rand Memorial.—Back in July, the secretary received an awful shock, which nearly incapacitated him for some time. Unbelievable as it may seem, the following letter from Selby Haar was actually received:

Enclosed please find money order for dues for 1914, receipt of which please acknowledge. I am sorry to say that I haven't seen many '04 men recently. I see Billy Evans occasionally, and several months ago ran across Burnham who was major of the freshman battalion, or something like that. He is now with the Public Service Commission here. Tell any of the fellows who are around this way to look me up with the American Gas and Electric Company, 30 Church street, New York City.

Never before has the present secretary had money thrust upon him like that, and as before stated, the shock was so great that it was three weeks before he recovered sufficiently to send Haar the receipt requested. If you don't believe it, ask Haar. However, since that time, the class has resumed its customary quiet and no further communications, monetary or otherwise, have disturbed the peace of the secretary. The usual request for news from the fellows is repeated, not with any hopes of receiving any, but as a mere matter of form. With the coming of the long winter evenings, the secretary hopes to be able to devise some other means of extracting news from the crowd. He also has hopes of being able to get the old faithful bunch of Boston members together to form some sort of plans for the coming reunion next June. If any suggestions for this occur to any reader, waste no time in jotting them down and mailing them to the secretary.

The following address changes have been received: B. C. Averill, Beaumont, Texas.—James McF. Baker, 1289 Dean St., Brooklyn, N. Y.—E. W. Calkins, Jr., North Abington, Mass.—J. F. Card, 445 N. Sacramento, St., Chicago, Ill.—C. C. Carhart, 1720 M St., Sacramento, Cal.—H. K. Chapin, 68 E. Goethe St., Chicago, Ill.—Miss Eliza Codd, Nantucket, Mass.—David Elwell, 7 Lakeview St., Arlington, Mass.—Wm. A. Evans, 90 West St., New York, N. Y.—F. W. Farrell, School St., W. Brookfield, Mass.—Haldeman Figgelmessy, Aviation Grounds, Oakwood Heights, Staten Island, N. Y.—G. R. Gaenslen, 403 St. Anthony Ave., San Antonio, Texas.—H. M. Haley, 34 Centre St., Beverley, Mass.—G. B. Harrington, 604 First Nat'l Bank Bldg., Chicago.—C. R. Hayward, M. I. T., Boston, Mass.—W. T. Keen, 49 S. 18th St., Flushing, N. Y.—N. F. Kerr, Home Mining and Milling Co., Bullion, Nev.—H. K. Lowr'y, Rock Island Lines, Eng. Dept., Chicago, Ill.—M. G. Magunson, 202 Second Ave., S. Minneapolis, Minn.—R. D. Mailey, 16 Hamilton St., E. Orange, N. J.—H. Merryweather, Bethlehem Chile Iron Mines Co., La Higuera Coquimbo, Chile.—J. G. Metcalfe, Jr., L. & N. R. R., Knoxville, Tenn.—R. M. Phinney, 2081 Estes Ave., Chicago, Ill.—G. M. Proudfoot, 122 S. Michigan Ave., Chicago, Ill.—J. V. Rathbone, 209 S. La Salle St., Chicago, Ill.—R. G. Rice, 314 Leader-News Bldg., Cleveland, O.—E. L. Rupf, 181 New York Ave., W. New Brighton, N. Y.—S. Skowrouski, Raritan Copper Works, Perth Amboy, N. J.—C. H. Stebbins, 76 Meridian St., Melrose, Mass.—C. L. Steinrok, 5822 Holden St., Pittsburgh, Pa.—A. J. Sweet, Majestic Building, Milwaukee, Wis.—E. P. Tripp, 33 Lyman St., Springfield, Mass.—R. B. Williams, P. O. Box 278, Birmingham, Ala.

1906.

C. F. W. WETTERER, *Sec.*, 147 Milk Street, Boston, Mass.
JAMES W. KIDDER, *Asst. Sec.*, 50 Oliver Street, Boston, Mass.

A recent issue of the *Engineering News* contained the following announcement regarding Charles Saville of Course XI:

Mr. Charles Saville, Assoc. M. Am. Soc. C. E., has resigned from the firm of Herring & Gregory, Consulting Engineers, New York City, and will spend the coming winter in Boston, Mass., taking a graduate course at the School for Health Officers at Harvard University and the Massachusetts Institute of Technology. His home address is Waban, Mass.

It is perhaps known to several of the class that Andrew Kerr, of Course VII, has been devoting his attention to the development of the clam industry. He is president of The Andrew Kerr Company, concerning which the following article appeared in a Boston newspaper during the early part of the summer:

"The announcement has been made that all plans have been completed for the erection of the storage plant, wharf and canal of the Andrew Kerr Company, at Plymouth. The Andrew Kerr Company, known in Plymouth as the Kerr Clam Company, operate the largest clam tract of any company in the world, comprising 600 acres of flats in Plymouth Harbor on grant of the Massachusetts Legislature.

The Andrew Kerr Company is moving practically its entire business from Essex, Mass., and Eastport, Me., to Plymouth. The new plant to be built provides for storage room for fruits, and provisions, for ice-making, for fish freezing, and for the packing and shipping of raw and canned clams and the manufacture of malted clams and clam bouillon cubes. The company is said to be the only concern in the world manufacturing the last two products, which are marketed through Armour & Company. The Plymouth officials have granted the company the privilege of a spur track to the main lines of the New Haven road.

The company has made arrangements with the Eastern Dredging Company to dig a canal from the Goose Point Canal to the company's wharf. The channel will be twenty five feet wide on the bottom, eight feet deep and about eight hundred feet long. Part of the proposed channel is now ten feet deep and will only have to be widened.

The completion of The Andrew Kerr plant, which is going forward under the supervision of Andrew Kerr, G. A. Cuskley, and Captain D. H. Craig of Plymouth, F. D. Mack of New York, and Frank Wyman, Jr., of Boston, will add materially to the development of the waterfront of Plymouth and it is expected to be the initial step in general movement to develop Plymouth Harbor between the New Haven railroad station and the plant of the Plymouth Cordage Company."

The preferred stock of Kerr's company has been marketed through J. S. Osler & Company of Boston.

The following address changes have recently been received: Andrew L. Bell, Balboa, C. Z.—Walter S. Brown, Underhill Ctr., Vt.—Frank A. Browne, 178 Walden Ave., Buffalo, N. Y.—W. E. Chadbourne, 41 Newport St., Dorchester, Mass.—Robert S. Clark, 1217 Mitchell St., Victoria, B. C., Canada.—Frank E. Dixon, 14152 Euclid Ave., Cleveland, Ohio.—John J. Donovan, 310 Security Bk. Bldg., Oakland, Cal.—George C. Furness, 28 Mentz St., Niagara Falls, N. Y.—Geo. W. Guernsey, 5 Upland Road, Wellesley, Mass.—Edw. L. Mayberry, 689 Pacific Elec. Bldg., Los Angeles, Cal.—Arthur Neale, Cornell, Wis.—Charles Saville, Waban, Mass.—Herbert S. Whiting, Holophane Co., 16 E. 40th St., New York, N. Y.—F. H. Willcox, Bu. of Mines Exp. Sta., Pittsburgh, Pa.

1907.

BRYANT NICHOLS, *Sec.*, 10 Grand View Road, Chelsea, Mass.
HAROLD S. WONSON, *Asst. Sec.*, 354 Congress St., Boston, Mass.

News from the members of the class is usually rather scarce during the summer months, and, as this has been the case this year, the following brief series of notes about a few of the men is the total new information which the secretaries have:—Franklin O. Adams, Jr., now has his architect's office in the Citizens' Bank Building, Tampa, Fla.—The only safe place to which mail for John G. Barry can be sent, with any degree of certainty of his receiving it, is his home address, 5 Buffum street, Salem, Mass.—Carl Brewer is now at Crystal Falls, Mich.—Howard Chase, still in Providence, R. I., has changed his address to 6 Aurora street, in that city.—The proper address for W. B. Coffin is 5 Wellington Terrace, Brookline, Mass.—G. A. Crane, 210 Read Building, Montreal, Can.—S. J. Egan, 223 Seymour street, Syracuse, N. Y.—M. H. Eisenhart, with the Eastman Kodak Co., is living at 371 Barrington street, Rochester, N. Y.—Word received in June from Mrs. Warren A. Gates gave notice of the death of her husband, who was a member of '07, of the architectural course. Gates had worked for the Buffalo Expanded Metal Company of Buffalo, N. Y., the General Fireproofing Company of Youngstown, Ohio, and for the Layton & Smith, architects, of Oklahoma City, Okla., as engineer and superintendent, since his graduation. It was in his home in Oklahoma City that he died on May 24, 1914. Besides his widow he leaves a daughter, Helen Barbara.—R. N. Hall has moved from Brockton, Mass., to 1016 Center street, Newton Center, Mass.—Warren Hastings, still with the New Jersey Zinc Company, is now at Ogdensburg, N. J.—F. C. Jaccard is with the Anaconda Copper Company, Anaconda, Mont.—Conrad Jacobson, 360 West Erie street, Chicago, Ill.—A message from George Johnson, father of Bert D. Johnson of '07, gives the following sad news:

Bert is now in Dr. Given's Sanatorium in Stamford, Conn. His mind gave way while he was assistant chemist in the Agricultural Department at Washington. He has been in one hospital or another since July, 1913. We have from physicians very little encouragement of his recovery.

The sympathy of the class goes out to these parents.

Two important events have come into the life of "Granny" Jones. The first in point of time, at least, is his departure from Kansas, where he had been a member of the faculty at the University of Kansas and also consulting engineer for the Division of Water and Sewage of the State Board of Health. He has now gone to become a member of the faculty at Johns Hopkins University at Baltimore. They are opening a new engineering school there, and Prof. Jones will have charge of the development of the course in sanitary engineering and hydraulics. The second event is the arrival in "Granny's" home of a daughter, Hilda Mary, on October 1, 1914. Every member of '07 extends to our classmate his hearty congratulations on his continued prosperity and success.

—E. F. Kelly, Central Illinois Public Service Company, Mattoon, Ill.—"Stud" Leavell is at Aurora, Nev. Just what he is doing we cannot say, but we are sure he is making his presence felt. Ask Hosmer whether he agrees with that.—Harry Moody has once again changed his address. Now it is 97 Ocean street, Lynn, Mass.—Fred W. Morrill, who described at the '07 five-year reunion the attractions of Chinese girls as he had observed them in China, finally decided to pass them by, and on September 19 was married to Miss Beatrice Webster of Haverhill, Mass., his home city. Gilbert Small was one of the ushers. Mr. and Mrs. Morrill will live in West Roxbury. Fred is a practising civil engineer in Boston. Once again the class says, "Congratulations!"—Write to the University Club, Portland, Ore., if you want to reach Floyd A. Naramore.—"Tucky" Noyes writes:

I am in Fryeburg, Me., as resident engineer for the State Highway Commission, headquarters at Augusta, Me. You can put me down for a change in position. I've been here since the first of September and the construction will last as long as weather will permit. Maine is just waking up to the value of good roads, and systematic efforts began on a large scale this year. The work is very interesting as every stroke makes a showing. This town! You've heard of a "one-horse town"? Well, this is a "horseless town." If you have ever lived in a 2,000 inhabitant Maine town, you will appreciate the social advantages; if you have not, there's no use in my trying to enumerate them.

—A letter received last May from Raymond W. Parlin, care of Bureau of Municipal Research, 261 Broadway, New York City, follows:

Have changed my address recently to New York City, as you will note. My new job is one of the most interesting I have tackled. It is that of investigator in the Training School for Public Service under the Bureau of Municipal Research at 261 Broadway. The work takes me into many of the city departments and gives me a very fine chance to study at close range the operation of the same. My present major assignment is to the department of street cleaning, where I am fortunate to be working directly under Commissioner Fetherston, an engineer of

good standing, who combines good engineering ability with an excellent knowledge of human nature, which makes him in my opinion an executive exceedingly well fitted for the place he holds. I hope to see service in many departments during the next year and come out better fitted to take charge of public work.

Perhaps you will be interested to know that Raymond W. Parlin, Jr., was born on October 27, 1913, and is heading rapidly for the 1932 football team. I guess he is more an '07 baby than any other. What do you think?

Mrs. Parlin (Maude Darling '07) has kept her interest in architecture by building several buildings while we lived in Maryland and now and then doing special work for her father. Both Mrs. Parlin and I would be glad to have our '07 friends look us up when in New York, either by calling me at the office or looking us up at 1051 Prospect Place, Brooklyn, where we expect to be after July 1.

The American Architect of October 21 has an announcement to the effect that the publishers have undertaken the task of supplying a series of worthy examples of architectural detail in such form that they may be readily and accurately adopted by the practicing architect when occasion justifies. To insure the character of the work the services of two men have been secured—W. G. Thomas of Harvard, winner of the Robinson Scholarship and J. F. Fallon of '07—the editorial continues as follows:

Men eminently qualified for the task by training and practical knowledge, gained by travel and observation abroad. They are instructed to visit Northern Italy and secure such details in the form of photographs and measured drawings as in their judgment possess at once the greatest architectural charm and practical value. These special representatives have thus far visited Genoa, Milan, Bologna, Venice, Verona and other cities situated in the "Valley of the Po."

It will be recalled that Chipman went North on the Stefansson expedition. A letter from him, dated Fort McPherson, N. W. T., July 7, 1914, contained the following notes:

On March 16, Cox and I left Collinson Point and went to Herschel Island. There we separated, he mapping the Firth River and then spending the spring on the coast line, while I went directly to Igrukitaqtak, in the Mackenzie delta, where I waited for open water. This came on June 4, and I spent the rest of the month mapping the delta, arriving here on July 1 to meet the steamer with our mail and freight. Cox got in here on the 3d. The steamer is now daily expected. I do not think I ever before in my life looked forward to anything so anxiously as I now do to whatever that steamer has for us. It is more than a year since I left the United States.

—Don Robbins, Farnsworth street, Boston, Mass.—T. G. Smith, 20 Woodlawn Terrace, Waterbury, Conn.—Another chance for extending best wishes: to Ed Squire and his wife was born on July 10, 1914, a daughter, Phyllis Ethel Squire. Address is Needham, Mass.—E. C. Story, 44 Millet street, Dorchester, Mass.—Carl J. Trauerman is at Landusky (via Malta), Mont. He contributed an article to the *Mining and Scientific Press* of June 13, 1914, entitled "Inducing Capital into Mining Enterprises."

1908.

RUDOLPH B. WEILER, *Sec.*, care of The Sharples Separator Co.,
West Chester, Pa.

CHARLES W. WHITMORE, *Ass't Sec.*, care of Lockwood, Greene
& Co., 60 Federal Street, Boston, Mass.

I. On the part of the Secretaries

Your secretary was in Boston the latter part of August and looked up some of the fellows, but all were out of town. However, he ran across Sando, Cook, Link, Mayo and Dick Ayres around the city, also Doug Cairns and M. Porosky.—Mr. and Mrs. Julian H. H. Harwood announce the arrival at Gold Run, Cal., of Virginia Cartwright Harwood on June 21, weight 5 pounds.—The following is from the *Providence Journal* of September 16:

Gregory M. Dexter, formerly of Providence, a graduate of Technical High School, class of '04, and Massachusetts Institute of Technology '08, who for some time held a responsible position with the Oregon Short Line Railroad, resigned that position on August 1, and has accepted a government position in the engineering service. He is now stationed at Wheeling, W. Va. Mr. Dexter graduated from M. I. T. at the age of 20 and at once accepted a position with a firm of engineers in New York. Later he entered the employ of the Oregon Short Line and rose rapidly in his profession.

II. Matrimonial

We had to go to press in April with nothing under this heading—the first time since graduation. However, the deficiency is more than made up by the following: Ex-Secretary John T. Tobin was married September 23 to Miss Mary Agnes Ainsworth at Princeton, W. Va.—W. B. Hunter was married June 17 to Miss Edith May Burrows at Brooklyn, N. Y.—L. S. Goodman was married September 3 to Miss Beatrice Kilburn at Greenfield, Mass. They will reside at Newark, N. J.

Annual Field Day

The annual field day and bi-monthly dinner was held at Nantasket Beach on July 18. The day was perfect and the crowd left Boston on the 1:15 boat, arriving at the beach an hour later, where a diamond was at once laid out and the ball game started. There were more married men than single, and it was necessary to add a married man to the single team for a while. Every one wanted to know where "Pop" Gerrish was and wondered why he hadn't been to a thing since he was married. Some one said, "His wife won't let him."

The game was a regular one and full of snappy playing. It must be acknowledged that the single team put up a game fight, but the "Better Halves" were there in the pinches. The appearance of Cary and Coffin was a great help to the losing team. They started at an awful clip but could not stand the pace. In the last inning with the game tie, the married men sent in two runs and then held the single team to only one run in the last half:

	1	2	3	4	5	6	7	Total
Married	0	0	1	5	0	0	2	8
Single	0	2	1	0	3	0	1	7
Umpires, C. W. Clark, M. Ames, (assistant); scorer, A. W. Heath.								
Line up: Married.								Single.
Williams, p.								Palmer, c.
Barton, 1st.								Barrett, 2d.
Batchelder, 2d.								Leslie, s.s.
Whitmore, c.								Toppan, 1st.
Belcher, 3d.								W. D. Ford, p.
C. C. Ford, s.s.								Bangs, 3d.
S. C. Lyons, l.f.								Robinson, l.f.
Chandler, c.f.								Hussey, c.f.
Beede, r.f.								Putman,* r.f.
Putnam,* f.								Coffin, f.
								Cary, r.f.

(*) Married—assisted singles for three innings (see score for determination of value of assistance). After the game it was all for a swim and the water sure was great. Dinner was called at 6:30 p. m. in the Dansant room of the Palm Garden and no appetites were missing. Toppan was the brave one of the bunch and had a dance with a young lady who turned out to be Coffin's stenographer. After doing the park the crowd went home on the next to last boat, all in. Those present were Alton Cook, L. Mayo, Bunny Ames, Winch Heath, C. D. Putnam, Palmer, P. B. Barrett, Doc. Leslie, Bill Toppan, W. D. Ford, Carl Bangs, Robinson, Hussey, Burt Cary, Lang, Coffin, Ed. Williams, Bill Barton, Ralph Batchelder, Whitmore, George Belcher, C. C. Ford, S. C. Lyon, Chandler and Beede.

The secretary has the following nervy note from C. O. Brown:

Your notice dated March 7, 1914, has been looking at me accusingly long enough, so here is where I get rid of it and some eagerly sought gold. Maybe you can send the gold to Europe and make a little on the side. Go to it, old horse, only if you are keen on coming back soon, better charter a tug for the only steamers on the ocean seem to be in great demand for war purposes. Are you going to return and fight for the Kaiser? I have been out here since the middle of April and like it very much. In this work I have a fine chance to see the country and am getting familiar with this state. It improves with age like some other things!

Enclosed find P. O. M. O. for three simoleons, covering dues to '08 for 1913, 1914 and 1915. Address me as follows, C. O. Brown, 406 Federal Building, Tacoma, Wash.

On the 15th of September the regular bi-monthly dinner was held at the Boston City Club. Only eleven showed up this time but for all that there was a good time, and the married men were there at the finish to win the bowling match.

It seems too bad that with the large number of men in and around Boston we cannot get more to the dinners. It is thought that many really intend to come but are too careless to keep track of the date or even save their postcards to remind them of it. Speaking of postal cards, we are now sending out about 125 of these

notices and this time about thirty consented to go to the bother of signing their names and mailing the return cards. Hence this list has been cut down considerably, eliminating those fellows who never bothered to send in their reply and further reductions will be made in order to save mailing expense. If you don't get a notice you will know the reason why.

Those present at the dinner were Doc. Leslie, Winch, Heath, S. C. Lyon, Pop Gerrish, Ford, Cook, Link Mayo, Pete Barrett, Tim Collins, Howard Luther and Whitmore.

CLIFFORD NELSON COCHRANE

The following is from the local Melrose papers:

Clifford Nelson Cochrane passed away at the Malden Hospital August 8 where he had been undergoing treatment for intestinal troubles and had had four operations performed. He was twenty-nine years old and was son of Mr. and Mrs. Maurice G. Cochrane of Howard street, Melrose Highlands. He was graduated from the Melrose High School in '04 and from the Massachusetts Institute of Technology in '08. After his graduation he was engaged for a time in mining engineering in the West. He then returned East and was connected with the Factory Mutual Fire Insurance Company and traveled through the East and middle West inspecting industrial property. More recently he was engaged in the lumber business in Virginia but ill health caused him to return to Melrose.

Previous to his going South he served on the Board of Aldermen as alderman from Ward Two. He was prominent in the athletics of the High School and an active member of the hockey team. He was a member of the Omicron Delta fraternity. He was a young man of much promise, was very popular with his schoolmates, and friendships at both school and Institute of Technology, have continued during these later years and he will be greatly missed by many with whom he has been associated in various ways.

He leaves a widow, his father and mother, two children and two brothers, Albert and Clarence Cochrane.

Funeral services were held at the residence of his parents on Harvard street on Tuesday afternoon, August 11, at 3 o'clock. Rev. J. O. Paisley of the Highlands Congregational Church officiated and the Harvard Quartet sang several selections. There was a large attendance of friends and a delegation of the Beta Chapter of Omicron Delta. There were many beautiful floral tributes. The interment was at Wyoming Cemetery.

Herbert T. Gerrish, W. D. Ford and B. W. Cary, the Committee on Resolutions, adopted the following

RESOLUTIONS

“WHEREAS God in his infinite wisdom has removed from our midst another of our classmates; be it

“Resolved, That in the death of Clifford Nelson Cochrane the class of 1908 of the Massachusetts Institute of Technology has lost a loyal member and a true friend; be it

“Resolved, That a page in the records be set apart in his honor and that a copy of these resolutions be spread thereon; be it

“Resolved, That a copy of these resolutions be sent to his bereaved family with our sincerest sympathy.”

The class sent a suitable floral tribute and a note of thanks has been received from Mrs. Cochrane.

New Addresses

William E. Barton, 70 Curtis St., W. Somerville, Mass.—Howard E. Batsford, 250 Fifth St., Niagara Falls, N. Y.—Donald Bowman, 72 W. Adams St., Chicago, Ill.—LeSeur T. Collins, 7 Highland St., Hyde Park, Mass.—Henry H. Damon, 16 Gould Ave., Malden, Mass.—P. R. Fanning, American Zinc Company, Mascot, Tenn.—Benjamin G. Fogg, Great Works, Me.—Herbert T. Gerrish, 172 Condor St., E. Boston, Mass.—R. Y. Kennard, 264 W. Delavan St., Buffalo, N. Y.—George C. Lees, 825 S. Alden St., Philadelphia, Pa.—John H. Locke, 4503 McPherson Ave., St. Louis, Mo.—Orrin S. Lyon, Metropolitan Building, New York, N. Y.—Edw. L. Moreland, 248 Boylston St., Boston, Mass.—Frank E. Mott, 39 Rossetier St., Grove Hall, Boston, Mass.—A. C. Nichols, 982 Beacon St., Newton Center, Mass.—Freeman E. Towle, 74 Clement Ave., W. Roxbury, Mass.—Leland E. Wemple, Hillsboro, Ill.—Charles W. Whitmore, Sharon, Mass.—George D. Whittle, California Highway Comm., Sacramento, Cal.

1909.

CARL W. GRAM, *Sec.*, care Walter Baker & Co., Ltd., Milton, Mass.

An attempt will be made at an early date to get the men of Boston and vicinity together. We need strong local support in order to have a bang-up reunion next year, so can use every man in one way or another. If any have recently returned to this vicinity, be sure and notify the secretary in order to insure the receipt of all notifications. If you don't have time (or are indisposed) to write, telephone during the day to Milton 224, or at night to Milton 106-W.

An announcement was received of the marriage of Miss Olga Mary Kelsey to Elmo Arnold Robinson on September 2 at Fort Covington, N. Y. At home, 126 West Twelfth Street, Anderson, Ind.—On October 14, Lawrence R. Forrest was married to Miss Aroline Whittredge Jaques of Lynn, Mass.—S. L. Burgher was married on June 13 last to Miss Mildred Tuthill at Orient, Long Island.—Burgher is with the Massachusetts Bureau of United Inspection and is living at Highland avenue, Winthrop, Mass.—From Carleton Hubbard we received an announcement of the birth of a son, Malvern Drexel, on August 22.—John Nickerson writes from 1 Lilly street, S. Manchester, Conn., on August 16:

You will note from the above address that I have left the Sayles Bleacheries. I have become associated with Cheney Brothers, silk manufacturers, as industrial engineer under the direction of Mr. H. L. Gantt. Drop a line and let me know how you are making out. Should be more than glad to see or hear from any of the fellows who are around this way.

Out of ten appeals for news sent out a month ago to fellows located in different parts of the country, only two replies were received. Bill Kelly writes, in part, as follows:

I rarely see any of the fellows here. Fred Dewey was in for lunch with me a couple of weeks ago, and I had Cy Young here for the evening about two months back. I left the United States Rubber Company in July, and am still loafing. Tomorrow I start for Akron, Ohio, and begin work again on Thursday with the Firestone Tire & Rubber Company. I understand that there are several Tech men there and perhaps I shall have more news for you when the next number of the REVIEW goes to press. Otherwise, there's nothing doing. I am neither married nor engaged, and hence can't awaken any interest in those quarters. I will send you my new address in Akron as soon as I get settled.

From "Mollie" Scharff we received the following:

I have been intending for a long time to write you anyway, and your plaintive appeal, which reached me today, was all that was needed to stir me to action. I hesitate, however, to mention anything in connection with my return from the war zone. For such stories are now-a-days all too common. However, if you're swamped with such contributions, just ignore mine. First, however, I've nothing startlingly new to report in connection with my career. I am still living in Pittsburgh, as principal assistant engineer with Morris Knowles, M. I. T., '91, with plenty of interesting work in the line of water supply, water purification, sewage disposal, and industrial town planning, which takes me occasionally to Alabama, Indiana, Chicago, New York, and intermediate points. So I have the good fortune to see some of my scattered friends occasionally. And I have so far escaped the wiles of the fair sex so successfully that I am still neither married nor engaged. But there are only a few of us left!

I had an exceedingly delightful and interesting trip this summer. On July 3 I sailed from New York with a party organized by the field secretary of the National Housing Association to attend the International Garden City and Town Planning Association, meeting in England. We spent the first week with the association, meeting delegates from all over the world, and visiting the Garden Cities at Hampstead, Ealing, Harlowe, Bourneville, Port Sunlight, Letchworth, and others, as well as taking in some points of interest in London, Birmingham and Liverpool. Then our party of Americans spent a second week, going over much of the same ground and visiting Manchester in addition, and making more extensive studies of the points in which we were interested. While in London I noticed "Schnitz" Schneider's name on the register at the American Express Company, and tried to look him up. But, though we talked over the telephone, our plans went wrong, and we never did succeed in meeting. I then had a couple of weeks' vacation coming to me, and so took a swing around the continent, taking in such interesting places as Potsdam and the Eispalast at Berlin, the Hofbrauhaus and Alt Munche at Munich, Lakes Lucerne and Geneva, Interlaken and the Jungfrau, and on the night of the second of August I landed in Lyons, France.

After that I had all the usual troubles—standing in line for hours at police stations to get papers; living for three days with fifteen centimes in cash; and trying to keep the mobs on the street convinced that I wasn't a German.

Finally I got a chance to go to Paris on a troop train, which took twenty-two hours to make the seven hours' trip, and after a day in that painfully quiet place, I succeeded in getting passage, without a stateroom, on the French Line steamship *Chicago*, and so went to Havre. There I lived in the boat for six days, while we waited in the harbor for news that the troublesome German cruisers were out of the way. And so we sailed, and I finally reached New York on the night of August 23, after a pleasant passage, and no further inconvenience than having to sleep on deck in my clothes for seventeen nights in succession. I saw "Schnitz" again at the club in New York. He beat me in by a few days.

Well, I was glad to be back again, and I am only sorry I didn't have time to see the secretary, and some others of the boys in Boston, when I visited the Hub for six or eight hours the second day after my landing.

I hope to get back again for a longer stay—in case I don't make it before, I will be there in June anyway.

Address Changes

G. Wilbur Everett, 79 W. Jersey St., Elizabeth, N. J.—William F. Gilman, Jacksonville, Ill.—R. C. Glancy, 53 Cushing St., Waltham, Mass.—Delos G. Haynes, 1015 E. 18th St., Brooklyn, N. Y.—George A. Haynes, 148 High St., Boston, Mass.—F. L. Hunt, Wilmersdorf, Berlin, Landhausstr 31, Bei Stubner, Germany.—Louis Jacoby, 404 Cliff St., Dallas, Tex.—Frederick J. King, E. Chicago, Ill.—Robert C. Latimer, Ambursern Hyd. Constr. Co., 61 Broadway, New York, N. Y.—Thomas G. Machen, 22 E. 82d St., New York, N. Y.—E. D. Merrill, 1310 Pleasant St., Des Moines, Iowa.—George A. Morrison, 2111 Morgan Ave., Morgan Park, Ill.—John W. Nickerson, 1 Lilly St., S. Manchester, Conn.—George T. Palmer, Edge Hill Tr., Spuyten Duyvil, New York, N. Y.—H. H. Palmer, Dartmouth College, Hanover, N. H.—F. Gardiner Perry, 266 Belmont St., Watertown, Mass.—C. S. Robinson, 1662 Columbia Rd., S. Boston, Mass.—Elmo A. Robinson, 126 W. 12th St., Anderson, Ind.—Edward L. Ryerson, Jr., 2558 W. 16th St., Chicago, Ill.—Albert F. Stevenson, 3715 Woodley Road, Washington, D. C.—Melville K. Weill, 3601 Clay St., San Francisco, Cal.

1911.

ORVILLE B. DENISON, *Sec.*, Hotel Standish, Worcester, Mass.
HERBERT FRYER, *Asst. Sec.*, 1095 Fellsway, Malden, Mass.

Another world's series has passed into history and for the second time since we left the Institute the City of the Sacred Cod harbors the champions of the world! Four great wins, successively obtained, for the Stallings Band of Indians from the proud cohorts of the once great House of Mack. Wow! Since this is to be a chronicle of the recent deeds of our illustrious class, and not a current sporting résumé, enough of baseball!—Let us turn to things more sordid, marriage, for example. This is apparently the favorite sport of our class, regardless of former athletic likes and dislikes. Believe us, the class of 1911 of the Massachusetts Institute of Technology are at least contenders for honors in the matrimonial league world's series. Since last an article was written concerning 1911 for the REVIEW, the list of our benedicts has grown appreciably. Slowly, but none the less surely, the figurative scales of our class are approaching that balancing point, beyond which a new state of non-equilibrium will be maintained, in which the married men of the class outnumber the single ones. Now all ye "bachelors," chant in unison: "Hasten, oh hasten the day!"—Ushering in the month of June, peculiarly coupled as it always is with "brides," Bill Pead, VI, was married to Miss Nettie Barnes Stevens at Belmont, Mass.—Later in the same bridal month, to be exact on the 20th, Walter Hildebrand found time to get away from business long enough to become the worse

half (rather a back-hand way of saying it, but none the less effective) of Miss Marie Vera Krause in the Windy City.—Royal M. Barton, VI, and Miss Lois Marden Ayer were married in Cambridge, Mass., August 14. On their return from their honeymoon, they settled at 54 May street, Worcester, Mass., where the groom is in the employ of Connecticut River Transmission and Power Company.—George B. Forristall, whose journalistic proclivities shaped themselves during his Institute career, entered the benedict class August 26, when he was married to Miss Ann Wood Brown at Lawrence, Mass. The young couple will be at home after November first at 601 Postoffice street, Galveston, Tex.—Bob Haslam was the next member of the class in chronological order to take the leap. On the 29th of August he was married to Miss Ethel Carter Cronin in Cleveland, Ohio.—Gordon Wilkes, better known as "Wilkie," was married September 3 to Miss Ora Eloise Borthwick at Portsmouth, N. H.—On the same evening, way out on the opposite coast of the United States, C. S. Anderson was married to Miss Ula Coleman at Woodburn, Ore.—A week later H. M. Davis was married to Miss Louisa Evangeline Foster here in the Hub.—Jack Devlin also joined the army of married men (you see the word "men" was chosen instead of "boobs," as in a popular song) when he married Miss Mary Stanislaus Manton at Roxbury, Mass.—September 23, regardless of the supposed hoodoo connected with this now famous number, was fearlessly chosen by S. B. Dyer as the date of his wedding to Miss Lois Brown Griffen at Portland, Me.—Joe Fuller went and done it, too! Down in Perth Amboy, N. J., on the evening of October 15, he was married to Miss Ruth Randall Brodhead. Thus endeth the tale of newlyweds for the time being, at least as far as 1911 is concerned.—Passing on now to the figurative "calm before a storm," engagements, we have a pair of prospective grooms, about whom you will be glad to hear. Fred Daniels announced his engagement on June 19 to Miss Eleanor Grace Goddard of Worcester, Mass.—The other engagement announced is that of Ken Faunce. The following clipping from the *Boston American* of June 28 gives you the whole thing in a "nut" shell:

LOVE OF DANCING LED TO ENGAGEMENT
WEST ROXBURY BELLE TO WED
KENNETH W. FAUNCE
WHO WROTE TECH SHOW MUSIC

Love that sprang from the admiration of Miss Grace Tufts for the dancing ability of Kenneth W. Faunce, Tech '11, has led to their engagement. It became known last night. Both are prominent in West Roxbury social circles. They first met at the functions of the exclusive Highland Club of West Roxbury. Young Faunce was given the terpsichorean honors, and so exquisite a dancer was he that Miss Tufts fell in love with him, and right at the same time he fell in love with her.

Miss Tufts lives with her mother and brother at No. 136 Corey street. She is fond of outdoor life, is interested in poultry, has a lot of blue-blooded chickens, is a dog fancier and has a number of pedigreed canines. Her English sheep dog is her favorite pet. He has won a number of prizes and she says she just "adores

dogs." Like her fiancé, Miss Tufts is a clever dancer, a skilled pianist and a good singer. Faunce is an electrical engineer. He wrote the music for several Tech shows when a student and has a reputation among his friends for being a gracious entertainer.

Words of Great Men, Toblitsky says, "S'Enough!"—O. W. Stewart is still with the Factory Mutual Company, and at present is in the Middle West, and, according to a recent letter, is "on the road" all the time.—Lloyd Cooley and Ted Van Tassel are hard at work in Stoneham, Mass. Ted has started a promising leather business, under the name of the Van Tassel Leather Company, and Lloyd is his right-hand man. More power to them!—"Doc" Wells, Course VI, in a recent letter writes:

Since the first of the year have been associated with the Floyd, Wells Company, and have been energizing my mental field across the high potential of the heater and range business, and, I might add, with considerable hysteresis and eddy current loss superinduced by the apparent phase displacement between the comparatively simple questions: Why is a stove when it smokes? And if the door is ajar will the cellar heater? Albeit, if the thermometer keeps discreetly below the frost line next winter, and if a sufficient number of you baches assume the bonds of matrimony to boom the stove business, we may get to the big reunion after all.

In the meantime give my best regards to any of the bunch whom it is your pleasure to run across.

—Joseph N. French, Course IV, patriotically wrote to the secretary on Independence Day. At present he has charge of construction work on Henry Ford's new residence, nine miles outside of Detroit. He expects to get back for the reunion in June.—A nice, long letter from Percy Rideout was recently received from Greenwood, Miss. Just the kind of letters the secretary is tickled to death to receive, providing, as it does, a lot of news for this section of the REVIEW. Listen:

There may be lots of Tech men in this world but I haven't seen one for so long I've forgotten what they look like. I hope I'll be able to be back at Boston when the New Tech is completed in 1915 and help celebrate the great event. What have I been doing during the intervening three years? Not much that is exciting as yet. However, I can see daylight ahead. After a year of railroading on the Big Four through Illinois, Indiana and Ohio, I entered the Office of Public Roads as a civil engineer student. For six months I studied different kinds of road construction through Texas, Arkansas, Mississippi and Maryland. Then I spent four months in the physical and chemical laboratories at Washington, studying the different road materials. This, with a course in economics, bridge design, etc., completed the preparation for the highway work which the office is doing. While in Washington I joined the Tech society and met some mighty fine fellows. The society was nearly dead at the time and had only one dinner during the winter. In the spring of 1913 I went to Appomattox, Va., where I built four miles of object lesson soil road. It was while at Appomattox that I decided to take the fatal step and so, in October, I sailed back to Massachusetts after the girl I left behind me. This spring I came down here in the Welta country to build twenty miles of gravel post-road. Fighting high water is the eternal problem here. Whether the next overflow will break all records and all levees and turn our streak of gravel into a river and thence to the Gulf of Mexico remains to be seen. Meanwhile we watch the thermometer flirt with 100°, pray for rain and dream of the cool breezes blowing up Boston harbor.

—Guy True is down in the Canal Zone, employed as draughtsman on

structural steel work. He sends regards to all the boys.—Bill Hodgman has left Taunton, Mass., and is now in Chicago, having affiliated himself with the Miehle Printing Press and Manufacturing Company.—R. H. Lord has sent another of his fine, interesting letters, this time from California, and it is a pleasure to reproduce it here:

You will notice that I have taken another little jaunt—this time to sunny California, and Los Angeles at that. The Griffin Wheel Company, with whom I am still affiliated, decided to build a branch foundry in Los Angeles and for some reason or other decided to send me to take charge of the construction and preparation of the plant for service. As it is a larger proposition than any I have yet handled, and as there is very valuable experience to be gained, I did not object too strenuously when told of the selection. As I am 2,300 miles from headquarters there is little opportunity for referring matters to them, and I am getting more self-reliance, a thing I needed. I believe the shop we are building will be the finest in this country for the manufacture of chilled iron car-wheels. All of the main buildings are absolutely fireproof, very light and airy, and will be fitted with up-to-date machinery and appliances. The Los Angeles newspapers speak of it as a \$500,000 plant, but they are so in the habit of exaggerating that they have added nearly \$175,000 to its cost. However, it is a fairly good-sized job. About a month ago, while on our way to the theatre, Mrs. Lord called my attention to a *good-looking* young man who was gazing our way. Naturally she thought she was the object of the glances—of course she never thought of a fellow gazing at me! However, it turned out to be Merrill, 1911, and we had quite a little talk. He was having a little holiday from his work as railroad apprentice for the Salt Lake Road. He has been stationed at some shop in Arizona—way up close to Heaven and miles and miles from all amusements except chasing flies and watching prairie dogs. Nothing to do but work and sleep. I have met a few other Tech men, mostly in a business way—but no 1911 men. This will have to do for a while—it's time to retire, so so-long!

That's the kind of letters to send in, fellows!—C. S. Anderson, whose marriage is recorded earlier in the story, writes as follows:

I am interested in the 1915 stunts but am afraid that I will be unable to be on deck—you see it's a long walk from here (Tooele, Utah) to Boston. Just recently I left Colorado where I have been ever since we escaped the clutches of the Inquisition, in the shape of finals. I came out to Utah to take up the duties of superintendent of the Clark Electric Power Company and certainly am enjoying my work here and like the country too. You see it seems good to soak up a little sunshine after refrigerating on the Colorado Peaks for three years. In coming through Salt Lake City I discovered Ted Parker, the new Inter-mountain tennis champion, toiling away in hydraulic engineering with the Utah Power and Light Company. Later I had the pleasure of calling on him and met his wife at their new home. He actually asked me if I remembered *Technique 1911*, the nifty issue, you know. When I showed him my gray hair—he believed and apologized. Quite like old times, our little reunion—so here's good luck for 1915!

—E. L. Woodward, VI, is still with the Boston & Maine, but is now located in the car shops at North Billerica, Mass.—Don Stevens reports everything about the same as usual.—“Bunnie” Wilson writes from Pittsburgh that he has accepted the spirit of the Tech-Harvard combine, and one of the two fellows with whom he now keeps house is a “Harvard.”—R. E. Anderson, III, is still working for the government with the title of junior mechanical engineer. Just at present he is engaged in dam construction work on the Ohio River at New Richmond, Ohio.—O. S. Clark is now working for

Daniel L. Shepard, 46 Cornhill, Boston. He is engaged in construction work and will be glad to see any 1911 men who may find themselves in that vicinity of the Hub.—The *Toledo Blade* of June 19 announces the opening of the France Engineering Company for business in the Second National Bank Building. Isaac Hausman, a 1911 man, is mentioned as one of the members of the firm. He has been connected with engineering projects, such as railroad location with the Union Pacific and railroad construction with the Pennsylvania. For two years he has been with the Toledo Bridge and Crane Company.—The following professional card has been received by the secretary:

John Garretson Eadie, M. E., Mortimer Freund, E. E., James Kenneth Campbell, S. B., desire to announce that they have established the firm of Eadie, Freund and Campbell, Consulting Engineers, with offices at No. 7 West 45th street, New York City.

The third member of the firm will be recognized as none other than Jim Campbell, a 1911 member.—The following is clipped from the *Brockton (Mass.) Times* of June 30:

Leland D. Wood of Taunton, for the past six years employed as engineer at the local plant of the Edison Company, was appointed manager of the municipal lighting plant of Taunton today by Mayor Fish of that city. Mr. Wood is the son of Benjamin L. Wood of Taunton, and is a graduate of the Taunton High School. He graduated from the Massachusetts Institute of Technology, class of 1911. He has studied at Worcester Polytechnic Institute. He started his career in the electrical line as patrolman of the high tension line between Quincy and Newport.

—Look at this from the *Boston Transcript* of July 22:

The Beaver Contracting and Engineering Corporation, George C. Kenney and L. Gordon Glazier of Boston; \$25,000; general construction.

Some speed to those two boys!—Here's a characteristic letter from our old friend Peter Desmond White (God bless him) who is in Canada:

I might not have written you for the next ten years if it were not for the slanderous insinuation of a classmate of mine in the last REVIEW, that I was probably married. Have it printed in bold type that *I Am Not Yet Snitched Up*, and for the inquisitive tell them I have fled the East for the wild wilds of northwestern Canada and I am not partial to squaws. Furthermore should I come across the girl I will have to give her up to Don Stevens, who has promised me 30 per cent. on his dowries. As I receive numerous announcements of the fellows being married it seems remarkable that one of such an affectionate disposition as Don should remain single. Don't you remember how on the least provocation he would insist on giving you an osculatory face-wash?

Now as regards what I am doing, just tell the fellows I am "Empire Building" and speculating in oil. A year and a half ago I left the Yale & Towne Manufacturing Company and came out here to Calgary with the Canadian Pacific Irrigation scheme. At present I am working on a sector dam across the Bow River just outside Calgary. This dam diverts the water into the canal which supplies the company's eastern section with water for irrigation purposes. Calgary is simply mad over having struck oil a few miles outside the city, and in a short time I expect to return East another John D. What on earth has become of Wilkie? I heard a rumor a short time ago that he was running a beer garden in Milwaukee.

Some blarney!—Now for the address changes. By the way, just cut this out and paste it in your hat:

BE IN BOSTON IN JUNE, 1915!

Address Changes

H. B. C. Allison, 24 Parkwood Boulevard, Schenectady, N. Y.—C. S. Anderson, P. O. Box 296, Toole, Utah.—R. E. Anderson, care of U. S. Engineers, Dam No. 35, New Richmond, Ohio.—J. T. Arma, Jr., 161 Henry Ave., Brooklyn, N. Y.—R. M. Barton, 54 May St., Worcester, Mass.—George A. Brown, The Milton, Suite 1, 496 Hanover St., Manchester, N. H.—P. K. Brown, 301 Tajo Building, Los Angeles, Cal.—Paul Burdett, 85 Water St., Boston, Mass.—O. van H. Chase, 47 Newtonville Ave., Newton, Mass.—S. H. Cornell, 67 West 83rd St., New York City.—P. A. Cushman, 310 Shreve Building, San Francisco, Cal.—J. H. Dunlap, 78 Grand Ave., Akron, Ohio.—Rudolph Emmel, 930 West Copper St., Butte, Mont.—G. B. Forristall, 601 Postoffice St., Galveston, Tex.—S. A. Francis, 19 Blagden St., Boston, Mass.—J. N. French, Dearborn, Mich.—R. H. Gould, 1 West 81st St., New York City.—M. A. Grossmann, care of Pittsburgh Testing Laboratory, Pittsburgh, Pa.—H. M. Hallett, 5903 Walnut St., Philadelphia, Pa.—R. T. Hanson, Naval Constructor, U. S. Navy Yard, Charleston, S. C.—F. C. Harrington, 1024 Mensey Building, Washington, D. C.—W. K. Hodgman, Jr., 1515 West Monroe St., Chicago, Ill.—W. B. Hopkins, 147 Milk St., Boston, Mass.—W. E. Humphreville, Jr., 209 Levy Building, Houston, Tex.—H. G. Jenks, 10 Langdon Block, Montpelier, Vt.—H. S. Lord, 24 Cumberland St., Boston, Mass.—R. H. Lord, care of Griffin Wheel Company, Huntington Park, Cal.—C. H. S. Merrill, Milford, Utah.—A. C. Metz, San Juan, Coah., Mex.—P. H. Pearson, 18 Auburn St., Concord, N. H.—C. G. Richmond, 68 Library St., Revere, Mass.—H. L. Robinson, 20 Tenney St., North Cambridge, Mass.—Edward Sisson, 26 Princeton St., E. Boston, Mass.—D. W. Southgate, 105 Johnson Ave., Winthrop, Mass.—M. R. Thompson, 1122 North M St., Tacoma, Wash.—M. R. Thompson, 244 Rector St., E. D. Van Tassel, 12 Edgehill Road, Perth Amboy, N. J. Winchester, Mass.—Julius Waldstein, 21 Temple St., Boston, Mass.—A. K. Wardwell, Box 582, Freeport, Me.—W. W. Warner, Nowata, Okla.—William C. West, 1507 East 65th St., Chicago, Ill.—W. R. Wheeler, 32 Oliver St., Boston, Mass.—P. D. White, care of C. P. R. Department Natural Resources, Calgary, Alta, Can.—J. L. Wilds, 20 West Jackson Boulevard, Chicago, Ill.—I. W. Wilson, Aluminium Company of America, Pittsburgh, Pa.—E. L. Woodward, North Billerica, Mass.—E. M. Young, 289 Massachusetts Ave., Cambridge, Mass.

1912.

RANDALL CREMER, *Sec.*, care Snare & Triest Company, Cruz Grande, Chile, So. America.

JOHN E. WHITTLESEY, *Asst. Sec.*, 10 Regent Street, W. Newton, Mass.

There is all this talk about hard times lately but I know of only one '12 man who has been laid off. From these indications I think things must be quite prosperous with some of our members, especially if you consider marriage as an indication of prosperity rather than poverty.—John L. Barry, Jr., was married on September 26 to Miss Ruth W. Reynolds of Newton Center, Mass. The ceremony took place at the Episcopal Church, North Scituate, Mass. —The following letter was received last summer from John Noyes, II:

I am scouting around the middle West and get up against all kinds of propositions. I am drifting more into mining work than mechanical as the coal mines in Iowa are presenting some interesting problems.

He did not mention, however, what was coming. The announcement that he was married on August 28 to Miss Caroline H. Clark at Brattleboro, Vt., comes as a surprise.—Also, Elliot W. Tarr was married on August 29 to Miss Emily I. Smullen at Dorchester, Mass.—“Heine” Partrige, II, writes:

I am still in what is known as the Branch Efficiency Department at the Firestone Tire & Rubber Company. This work takes us about the country a good deal and in many ways touches upon business engineering.

Enclosed was a clipping from the Elizabeth (N. J.) *Journal* announcing his engagement to Miss Marguerite Irwin.—The engagement of W. B. Hopkins to Miss Doris Evelyn Phillips of Cambridge, Mass., was announced on September 19.—Albert Harkness was married August 29 to Miss Sara Arden Chessman at Garrison-on-the-Hudson.—O. C. Lombard was married June 29 to Miss Helen J. Marcy of Dorchester, Mass. Miss Marcy was graduated from Smith in 1912.—If I receive another such long list I shall have to tabulate the marriages to save space.—Harvey Benson is now a proud father. Miss Elizabeth Benson was born July 21.—The Chicago bunch seem to flourish in spite of the war. They had the last meeting September 23 and H. S. Baker, '03, the assistant city engineer, spoke.—Karl C. McKenney, Houghton, Mich:

Three other fellows and myself are running a house here and enjoy the life of bachelors' hall. Several Tech men of the copper country, including myself, took dinner with Prof. Richards when he was here last June on business. This dinner was the first attempt to organize Tech alumni in the copper country and all but two turned out.

—F. W. Barker, Jr.:

I am now located in Philadelphia and am chemist for the Benzol Product Company. We are engaged in making dye bases, such as aniline and myrbane and kindred products.

I had a letter from J. H. Ellis last July. He was in Paris and expected to go to the École Normale this fall.

—I visited Hans F. Lehman's home early in June, and the servant told me that he had left suddenly about three weeks before and not even his mother knew where he was. Has anybody heard?

The *Municipal Journal* of New York, dated July 16, has an article defining very clearly the powers of the State Board of Health of Maryland. Owing largely to the investigations and report of the Bureau of Sanitary Engineering of Maryland, an act was passed by the assembly of the state this spring giving to the board a very comprehensive power over the health matters of the state. John Hall is in the service of this board as assistant engineer—after serving with the Massachusetts and also New Jersey State Boards of Health. His brother, Harry R. Hall, '07, is the assistant chief of the board. The following item was clipped from a local paper:

Abe Freedman, guard on the Y. M. C. A. basket-ball team the past two seasons and member of the M. I. T. varsity teams in 1910 and 1911, was unanimously chosen captain of the Y. M. C. A. first team for the coming season at a meeting of the players held recently. Freedman is a Brockton High and Technology graduate and a fine athlete. His work in the backfield with the Brockton Y. M. C. A. team the last two seasons has been a factor in the defence, and he should make an ideal leader.

V. V. Ballard is still on his ramblings:

A few lines to give you my newest and latest address, the third in twelve months. . . . Am holding down the position of job or rodman in the Interstate Commerce Commission Department of Valuation. . . . At present we are making an invention of the Atlanta, Birmingham & Atlantic.

—Here's another from the *Boston Herald* of July 4:

Mr. and Mrs. George B. Brigham, Jr., Westboro (Miss Ilma R. Howe), who were married Thursday evening, will go to Europe for their wedding journey.

—Although our old friend, Phil Redfern, is not naturally of a reticent disposition yet it has only come to light recently that he took unto himself a wife on December 31, 1913. Phil says that Guy Swenson is contemplating following his example.—We noticed in a New York paper dated October 10, the marriage of Nicholas McNeil and Miss Gertrude Cook of Waban, Mass. Charles McManas acted as best man. McNeil is now in the Government service, Washington, D. C.

Address Changes

Oscar K. Wiesner, 302 Andover St., Lawrence.—H. H. Babcock, 154 Whiting St., Chicago, Ill.—Russell T. Bailey, 835 Washington St., Dayton, Ohio.—J. H. Cather, Canadian Kodak Co., Toronto, Can.—Garth H. Duell, Ray Consolidated Copper Co., Ray, Ariz.—A. M. Eicher, 1487 Belmont Ave., Columbus, Ohio.—John B. Glaze, University Club, Niagara Falls, N. Y.—David J. Guy, 1160 North St., Chehalis, Wash.—Hamilton Merrill, Mamaroneck, N. Y.

—Carl H. Morrill, 41 Batavia St., Boston, Mass.—Walter F. O'Brien, care of Sullivan Machine Company, Juneau, Alaska.—O. D. Powell, C St., cor. Fargo St., S.-Boston, Mass.—Bartow V. Reeves, 452 Lafayette St., Palmerton, Pa.—John B. Romer, 12001 Yale Ave., Chicago, Ill.—Prof. J. E. Rush, care of Carnegie Tech Schools, Pittsburg, Pa.—Frank E. Starr, care of A. S. & R. Co., Santa Eulalia, Chihuahua, Mex.—Jonathan A. Noyes, 2839 Ingersoll Ave., Des Moines, Iowa.—John L. Barry, Jr., 181 Buckingham St., Waterbury, Conn.—George A. Robinson, Central Y. M. C. A., Trenton, N. J.—E. W. Tarr, 764 Morton St., Mattapan, Mass.—
—Walles, University Club, Albany, N. Y.—V. V. Ballard, care of J. Y. Bayliss, district engineer, Interstate Commerce Commissioner, Municipal Building, Chattanooga, Tenn.—Lester M. White, Y. M. C. A., La Crosse, Wis.—Ralph T. Walker, 1104 Franklin St., Melrose Highlands, Mass.—John M. Pettingell, V. S. Reclamation Service, Poplar, Mont.—E. M. Marshall, *Globe*, Ariz.—W. Graham Cole, 1831 Rutland St., Baltimore, Md.—A. C. Albee, 5 W. 125th St., New York City.—Donald E. Bent, 148 E. Ontario St., Chicago, Ill.—William C. Bird, *Broken Bow*, Okla.—H. H. Bracket, Oradell, N. J.—David Dasso, Apartado, 137 Callao, Peru.—Albion R. Davis, 9 Gardner Terrace, Allston, Mass.—Henry C. Dunbar, S. Main St., Randolph, Mass.—Vincent L. Gallaher, care of Aetna Insurance Company, Chicago, Ill.—H. W. Hall, Winsted, Conn.—Eugene T. Marceau, 5468 Blackstone Ave., Chicago, Ill.—Max C. Mason, 78 Westland Ave., Boston, Mass.—Allen W. Reid, 593 Madison Ave., York, Pa.—Richard H. Scanlon, 20 Dartmouth St., Leominster, Mass.—E. C. Van Syckel, 109 N. Second St., Steelton, Pa.—Frank D. Bishop, 19 E. Concord St., Boston, Mass.—Arthur Campbell, care of Standard Oil Company, Shanghai, China.—H. G. Jenks, care of D. S. Perley, Ipswich, Mass.—H. O. Jenkins, Box 306, Mt. View, Cal.—Antonio Romero, Fajardo, Porto Rico.

1913.

F. D. MURDOCK, *Sec.*, University Club, Hartford, Conn.

A. W. KENNEY, *Assoc. Sec.*, M. I. T., Boston, Mass.

Cheer up, fellows! you are lucky to have any kind of a job just now. The first derivative of Roger Babson's prosperity curve has at last become positive in sign, and the worst is over. Shortly after this REVIEW is out, we are going to have a class dinner, a real rip-snorting affair at the City Club. You will receive a notice, and if you are near Boston don't miss this get-together for anything. The mere fact that Hap Peck and Bill Brewster are going to have charge of it insures its success.

Arthur Kenney was the man to answer the distress call for a resident secretary, and you will find him always on the job at the Institute, where he is assistant to Dr. Noyes. If there is any service that he can render in the way of providing addresses,

sending out Tech buttons, or in any other conceivable manner, just call on him. He was allowed to assume the responsibilities of office only on condition that he try not to be an ornament, but make himself generally useful. It is requested that any inattention on his part be reported at once to the secretary in Hartford.

Here's a genuine appeal on the part of the secretaries. Won't you men who are about to be married please send one of us the announcements of your wedding? And won't you proud fathers send us the names and weights, etc., of your offspring? This information is very important for the class records. If any of you looked through the news of the other classes in the July number, you probably noticed that nearly every secretary was making an appeal to his classmates to keep in closer touch with one another and to turn in more class news; 1913 has made some fine records both as undergraduates and as alumni, and we'd like to show our superiority over the ordinary classes by not having to issue these periodic appeals. Let's stick together as '13 men; not because the secretaries and presidents and other class officers are doing detective work and rounding up the men by dint of individual efforts. We ought not to get the idea that the class consists of its officers.

Speaking of our class reputation, we can still "point with pride" to our matrimonial column. Hard times apparently have no effect on the enthusiasm of our classmates, who are as attractive in the eyes of the ladies as in the balmy days of junior prom and senior dance. Our department of married is rapidly growing and its members can readily be distinguished by their happy smiles, but there is still a large number to be heard from in this connection. Although some of our very best men are gone, there are still some very desirable ones left, for whom we suppose the competition must be very keen.

Bill Mattson's many friends have been waiting a long time for the opportunity to extend congratulations; and now they have had their chance. The engagement of Miss Ruth Willard Damon to our distinguished ex-president was announced this summer.—José M. Cadenas, another Course I man, has not been able to stay in Havana long without the charms of the ladies of that city having their effect. Miss Carmen Gimenez and Cady were engaged some months ago.—The old rivalry between I and II shows even in this line.

—There seems also to be an excellent reason why Ellis Brewster, II, should have returned East to Boston. Miss Ellen Hatch of Plymouth, to whom his engagement has recently been announced, may have had some suggestions along that line.—A clipping from the Boston *Advertiser* of October 16 reports the engagement of Miss Evelyn Wadleigh of Newtonville, Mass., to Barton E. Brooke, IV, now of Washington, D. C. The heartiest congratulations of the class go to these happy men, and a cordial welcome to our prospective sisters.

Many of our fellows have got beyond this preliminary stage and have settled down as family men. Charles A. Reed, Jr., a special student in '13, was married last May to Miss Helen L. Appleton of Brooklyn and spent the summer at Newport.—Just about graduation time this June, Charles W. Rieser, X, was married, in Emmanuel Church, not far from the 'Stute, to Miss Helen D. Haynes of Boston. A number of Tech men were there, including Caldwell, Norman Clark, and Forrester, all X, who were ushers.—Clarence Brett, whose marriage to Miss Verdi Wattson took place June 30, is the only Course I man we can trace as being entitled to mention here; but Brett is settled down like an old timer now, and hasn't shaken any dice since class day.—"Pop" Bruner, famous as our champion smoker, will now have to take his pipe out on the piazza or blow his smoke through the keyhole, for he also has joined the benedicts. His marriage to Miss Alice Bell Taylor took place August 24; and Pop's long training in public speaking showed up finely when it came his turn to say "I will."—Not to be beaten by a course-mate, Bob Bonney, X, was married the next evening to Miss Flora Imogene Reed in Melrose Highlands. The church wedding was very pretty, and several '13 men were there to learn the method. Bill Mattson, Zenas Crocker, and Phil Barnes were identified.—The chemically inclined portion of the class seems to have been most successful this summer and has clearly surpassed the other departments. The marriage of Miss Irene Washburn to Gerould T. Lane, V, took place September 9 in Great Barrington, Mass., where Gerry is a chemist with the paper mills; and it was an important event in the town history.—Naturally, Course II had to have a representative in the tide of prosperity. On October 5, Miss Mary Pickering was married to Thomas Wellington Pinnock, described by his friends as "a rising young engineer with the Aberthaw Construction Company." The wedding took place at the bride's home in Salem, and was the scene of much gaiety in which Tech men did their part. Peck, Farwell and Brewster were among the ushers. Our best wishes for long and prosperous lives go to these happy couples; and we wish them all success.

At last, the authentic news of Larry Hart's baby for which the class has been waiting with breathless interest has arrived. "Fred Van Allen Hart was born May 24, 1914, and weighed eight pounds. He is now (September 3) a buster and weighs sixteen pounds."—We have the news from reliable sources that a daughter has been born to Mr. and Mrs. Nathaniel Sage, I and IV respectively, but particulars have not been provided. We have no doubt that the 1913 babies are healthier, brighter, and look more like their parents than any other set of babies in the world, and if it came to a baby show we could beat any other class out of sight even the freshmen.

So much for our family affairs. In the meantime the men have indulged in other activities, and naturally Course I men having had the softest course at the 'Stute proceed to wander around the

world and enjoy themselves after graduation. The following letter from Manila was sent by Saleebey in June:

I spent the summer and stayed as late as the new year festivities in California. Then I left for a trip around the world. I had a wonderful time in Japan and China. From there I dropped into Manila, Philippine Islands, to visit my cousins. Here I was offered a place on the locating staff of the Manila Railroad Company and I accepted it. I am locating in the heart of the tropical jungle, but the spirit of adventure and of exploration in places not explored yet makes the work very interesting to me.

That kind of life ought certainly to provide sufficient material for a book in a short time.—Before people make remarks about the literary ability of Tech men, let them read this letter from one of our classmates and see if it does not compare favorably with Arnold Bennett and Burton Holmes. "Buttsy" Bryant started out to circumnavigate the country this summer, and this is his report, headed Pocatello, Idaho:

As you may remember I told you that I was going to take a trip around the country this summer, my last real vacation for some years at least. The July REVIEW reached me here in Pocatello and it sure seemed good to hear from some of the old friends of mine.

A little résumé of my trip and the things I have seen so far may be of interest to you and some of my other classmates. Having received my degree, I left Boston about June 20 for New York. While in New York, I saw the sights, of course, and looked up Joe Strachan. He seemed the same fellow that he was at Tech, but happier if anything. I guess being engaged agrees with him. I went to lunch with him and we talked over old times. He seems to enjoy his work and has a very good position. At the time, I think he was working on the design of docks for Savannah, Ga. I left New York the 24th of June for Colon, Panama, via United Fruit Company. The trip itself was rather uneventful with few exceptions, and I was slightly seasick owing to rotten grub. Off Kingston, Jamaica, we upset the pilot boat and had to drop a boat to their aid. Luckily no one was hurt or anything lost, and we reached Colon one week after sailing. The Washington Hotel in Colon, which is the only decent place there, is one of the finest hotels I ever was in. The rooms are large and airy and always cool, owing to the trade winds blowing in off the Atlantic at all times. Shower baths are connected with most of the rooms and in that climate are almost a necessity. One of the first places I visited was Gatun. Here are the dam and locks. From accounts which I had read and pictures I had seen I thought I had a fair idea of the size of things here. To say that I was surprised would be putting it mildly. This was even more true of Culebra cut. Words can't express the impression made. Wonderful seems best. The locks are under a rather heavy guard and no one can get across without proper credentials or a pass. Having inspected all we could of the tunnels we went up into the control tower. This is a place closed to tourists except when accompanied by an officer of the guard. Even then they may not go inside of the railings. This control board is probably one of the most wonderful pieces of electrical machinery in the world. Everything on the locks is shown here, either in miniature or symbolically. For instance, arms about four inches long, shaped like the top of the gates, swing simultaneously with the real gates, showing the exact position of each and every gate in the flight. These are spaced at scale distances along the board which is about fifty feet long. To show that the mitering device has worked, a little plunger moves to or from these miniature gates, indicating on or off. Graduated scales with moving indexes, indicate the height of the water in the various portions of the locks. Another similar device shows the approximate position of the big water gate valves in the tunnels. A little chain pulled up taut indicates that the corresponding guard chain is up. This does not loosen until the guard chain has been lowered. Again the board is so interlocked that no false

movement can be made. At least it hasn't been discovered yet. For instance, if the gates are closed, the guard chain cannot be dropped and vice versa. Many other interesting facts could be told but would take up too much space.

As for other parts of the canal a few words will be enough. For almost its entire length the channel is equipped with light buoys, one on each side at definite intervals and more where needed on the turns. Red is on the west side and white on the east, most of the lights being of the flashing type. Also each straightaway is equipped with range lights, the rear one in many cases being way back in the jungle. These are usually rapid flashing, about one-tenth second every second. This is only a guess but approximately correct. Going across by train one night I had the chance to see the canal lights in operation. It was a pretty sight.

One thing I forgot to tell you about Gatun. While there they passed a dredge down from the lake to the Atlantic. That was something that I shall never forget. While not much different from any other locking, the speed and ease with which it was done made it remarkable. Every citizen of the United States who can should visit the canal. No real appreciation of the work can be obtained in any other way.

Well, as to the rest of my trip, Panama city is most interesting. This is especially so if one happens to be there on election day, which usually comes early in July and things are quite exciting. It kept me busy keeping out of fights. This is also the place to buy Panama hats. I bought one for ten bucks which has been valued by an expert here as worth from fifty to seventy dollars unblocked. I also saw one worth seventy-five dollars there; here, a couple of hundred. A wonderful hat, almost as flexible as a felt one!

To go on, I went up to New Orleans from Colon. This service was very good but an ulcerated tooth about finished me. I got it opened in New Orleans but not until I had lost about twenty pounds weight.

Buttsy's description of New Orleans is so uncomplimentary that we don't dare print it for fear some fiery Southerner would insist on fighting him a duel, and we can't run any chance of anybody's "getting" our class goat. To continue with the letter:

From New Orleans I went to Los Angeles over the Sunset Route. I was lucky in that they had had heavy rains across the deserts. This made things cool, kept down the dust and actually turned things green. It wasn't until we had passed Yuma and entered the California desert that we lost it. The Imperial Valley (Cal.) is to me the hottest place on earth. It was up to 100° F. in the Pullman. At one station it was 120° F. in the shade and the handrails of my car were so hot I couldn't touch my hands to them. Never again at this time of year! And dust! In spite of the fact that the car was closed up as tight as possible the dust was almost suffocating. I heard a man who came across about a week later say that it was 115° in the car there. That's too much of a good thing.

Los Angeles is some place! The climate is just about right. I needed a vest most of the time in day and always at night, while the Central States and the East sweltered. The living here is also very cheap. Rent is not very low, but by living at the cafeterias one can live very cheaply. The B. & M. Cafeteria seemed the best to me. Here for 37 cents I had all I could eat, meat, potatoes, vegetables, iced-tea, bread and butter, and a large delicious strawberry shortcake. Altogether, my three meals that day cost me just 74 cents. I don't see how they do it, and yet it pays. This one place handles about three or four thousand orders a day. Even well-to-do people come there regularly in their autos. It's cheaper than getting up your own meals at home. For pretty girls, Los Angeles has them all beaten. If anyone wants to find a pretty girl let him go there. I'd like to stop awhile and see if I could have any luck. However, there is no work open at present. Things are flat there as well as in the East. Los Angeles has one of the finest street railway systems I have seen yet. To be sure it is an interurban affair running in all directions from five to fifty miles away. Besides running single cars, two, three, and four car trains are run through the streets. Locally the service is slow but the interurban service is very good. Frisco, my next place of attack, I was not so struck with. It was too cold to suit me. I had to wear an overcoat every evening and

sometimes during the day. I guess there's much truth in the saying that on one side of the street you'll use a parasol to keep cool and on the other an overcoat to keep warm. Of course I visited the exhibition grounds, being shown many of the electrical features by a Mr. Barbour, Tech '87. I also had dinner with Mr. W. S. Bliss, '87, and his wife, at their home in Piedmont.

I ran across one of our old friends, Algernon T. Gibson. That fellow is some hustler! He and two other fellows, about 24 years old, have formed the United States Sales Company. They are now conducting the manufacture of folding paper boxes by means of automatic machinery.

As they are the only ones on the coast using automatic machinery they have a pretty good chance to make a howling success of it. Gibson says that they only started active operation about July 1 and even now are not entirely broken in. He is running the factory end, while the other two hustle orders and look after the stenographer. Mighty pleasant fellows! After showing me around his factory, Gibson took me over to the Bohemian Club to dinner. This was a great treat. The club is wonderfully furnished and the cuisine was excellent.

I left Frisco about a week ago for Salt Lake City, whence I came to Pocatello. With Salt Lake, while interesting and rather eastern in character, I was dissatisfied. Everything expensive, and Mormons! Mormon this and Mormon that, until it gets on your nerves. If they weren't so aggressive it wouldn't be bad. Up to about five years ago the Mormons held the balance of power, but now there are enough Gentiles to counteract this. The layout of streets is poor, 660-feet square blocks with no provision for an alley. This little place is the main center of the Oregon Short Line. Trains going by about every five minutes day and night, quite interesting though. Indians are numerous. Although the men have adopted our usual attire or a semblance of it, the women still retain the original Indian squaw costume of brilliantly colored blankets. From here I go to Portland, Ore., Seattle, Wash., Vancouver, B. C., Canadian Rockies, Duluth, Minn., Great Lakes, Buffalo and back to Brookline, where I will look for a job. If I run across any '13 men on my way and learn anything about them I will drop you a line.

At last the class muse has aroused from a long period of lethargy, and contributes the following through our talented historian, Gene Macdonald, I:

You ask about my work, but—you ought to know better than that! And you must have plenty of material for the REVIEW as Bill Mattson's rash act ought to be good for a column,—and rumor persists that Custer is our money maker, gossip giving him \$5,000 per after one year out. "Billiken" Daggett, Newsome Eichorn and Ernest Osborne are rapidly bringing to completion their respective sections of the New York subway which in conjunction with my section will give this city the premier rapid transit system of—well of New York state. The most fun I've had since our senior week was to assist Jerry Lane in his hair-raising, heart-rending, death-defying act when he got away with the heart and hand of Miss Irene Washburn that was. The wedding was in the Saint James Church in Great Barrington, Mass., where Jerry has long resided, and where Miss Washburn's folks were careless enough to spend a few summers. After the ceremony proper, so to speak, though of course all was proper, there was a reception and dance in the Berkshire Inn. And when the bridal party sat down to their supper and I realized that there were five of us, Jerry Lane, Ad. Cardinal and I of '13, Eddie Upham, 1912, and Chet Ober, 1914, who had so often sat down together back at 16 Exeter, and looking out the window saw the beautiful Inn grounds flooded in moonlight I thought of the stanza of my old friend Omar Khayyam wherein he says:

"Yon rising moon that looks for us again
How oft hereafter will she wax and wane.
How oft hereafter rising look for us
Through this same garden and for one in vain."

But, believe me! when I see a chance of going off as happy as Jerry did, I'll go. Well, and the rest of the time I have been running around with our old friend "Pa"

Coburn and intimacy does not lessen one bit my marvel at that man—"and still the wonder grows, that one small head can carry all he knows." I certainly appreciate my good fortune in being thrown with such company, for "Pa" sure has given me a good time this summer. We have travelled many hundred miles in his machine on Saturdays, Sundays and holidays and had many different companions. The majority of these were of course Tech men but other colleges, including Stevens, Columbia and Princeton, have been represented; and once "Pa" was so far enticed from the beaten track as to try a Wellesley student. And having tried it once, he tendered a second invitation, which upon being delivered was received with the exclamation "Did he really? Oh, he's a peach!" Better found a finance committee at Wellesley, Pa! And so the summer went by like a shot and the fall came, but for the first time in five years I missed the last boat on the old Fall River Line and find myself stranded high and dry, in the dirty, mucky New York Subway.

A number of less spectacular reports have trickled in from other Course I men.—Ronald Wilson is civil engineer with the United States Geological Survey in Oregon.—R. P. Smith is with the G. T. P. Engineering Department as instrument man in British Columbia.—"Rupy" Schatz, still with Joseph Harding and Son, has been working in Utica since July 1.—Edward N. Taylor is a draftsman in Boston.—As the class has already been warned, Miles Langley is on his way to being a professor. He is instructor in mathematics and civil engineering at Bowdoin this year, and is already getting into the pedagogical atmosphere, as the following shows:

My work began the morning after I reached town. It was my first duty to set and correct the entrance examination in algebra and plane geometry. I was rather surprised that the task of setting a reasonable exam. paper is more difficult than the solution of the various problems which go to make it up.

That's the same old "bunk" the "profs." used to throw us in the good old days about their jobs being harder than ours.—Joe Strachan has gone to Savannah, Ga., to be assistant engineer to J. G. Basinger on a million-dollar concrete dock job, on the designs of which Joe has been working for several months.—The big West has claimed Albion Davis. He is doing hydraulic work in connection with the operation of the Mississippi River Power Company's huge, new plant.

Course II has produced no library gems this summer equal to those of Course I, but "Hap" Peck has given up his work with Bemis Brothers and is in Boston again. If he does not keep the managing editor of *The Tech* busy with communications from "An Alumnus," "1913," "An Old-Timer," etc., it will be only because his mind is occupied with higher things.—Clint Pearce was in town this summer and helped write up the Freshman "Bible." Professionally, Clint is instructor in the mechanical engineering department at Lafayette College at Easton, Pa. The department is a new one, and there are not many students at present; but Clint says he's not exactly loafing.—Howard S. Currier, in common with a number of other engineers, has taken up insurance work and is inspector for the Underwriter's Laboratories in Detroit.—Harry S. Parker left Course II before graduation and started a course at the Stevens-Duryea Works at Chicopee Falls. While

there he suffered a severe compound fracture of one of his legs, which retired him from service for some time. While recuperating, however, he has been able to take a long motor trip through California lasting several months. He expected finally to return to Chicopee and resume his work there.—Bill Brewster is back from the wilds, and will now teach the young idea how to smash things, in the applied laboratory. No wonder the Institute has an increased registration this year when we consider the "class" of its assistants. It was thought that if any one could tell about the biographies of the mechanicals, Bill would be the man; and an appeal to him from the secretary elicited the following reply:

George Clark, II, is back at the 'Stute as assistant again this year as is A. L. Brown, II. B. L. Cushing, II, and James Gordon Russell, II, did not come back to their assistant jobs. I don't know what they are doing, but I think Russell is loafing. Jack Farwell, II, is loafing, I think. He threw up his job in New York about a month ago and is now "retired" he says. Oh! by the way in passing, Ding Pinnock is to be married next Monday evening, and tomorrow night the famous four hundred get together for a bachelor dinner for him (said four hundred consisting of Peck, Farwell, Pinnock and myself). Program includes a feed and then a trip to the Follies. I saw Jerry Fallon in the station a couple of weeks ago and he was working, but it was only temporary he thought. Sullivan, II, is coming back to the 'Stute to complete the requirements for graduation this term.

I suppose you know that Peck is with the United Shoe Machinery Company at Marlboro?

In the number of letters sent to the secretary the Course III men have shown up best of all, even though they do swear shockingly. The following extracts show that for industry and versatility there's nothing like a Tech man, particularly a '13 man, and most particularly a Course III man:

Allen Brewer, III, is in interesting work. He writes:

I am located in the engineering office of the Public Utility Commissioners of Newark, doing appraisal and valuation work on public utility plants. Quite a departure from mining engineering isn't it, but the mining field is rather dull now so I was glad I was needed here. The work is very interesting since it involves a lot of types of plants and gives me a chance to learn new things all the time. . . . I'm glad to tell you that I can now call myself a real Institute man and alumnus. I'm more than glad to be able to consider myself always a 1913 man also, notwithstanding the "dip" is dated '14.

The following is a letter from H. M. Lawrence, Voights Camp, B. C. via Princeton dated July 17, 1914:

I came up in this neck of the woods some three months ago, after having been in Great Falls, Mont., for ten months. I left Great Falls because I saw that plans were under way to entirely cut out experimental work there. I was certainly right for on the very day that I left Great Falls notices were sent out to about twenty college men, who had been with the company for from six months to two years, that after May 1 their services would probably not be required. I was fortunate to get out under the guns as I did.

At present the work here consists of prospecting entirely. Diamond drilling is used in the main, but surface trucking and underground work is also practised to a slight extent.

My work here has been entirely along engineering lines. I have done some surveying but, as I am not keen for surveying, I had spent most of my time on geolog-

ical maps, sections through the ore bodies, and computations relative to the size and grades of our several ore bodies. It is interesting work and has proved profitable so far, as I received a raise the first of June with promises of more to come. As you probably know, H. W. Dew was with me in Great Falls. He hung on then until June 1 when he, too, quit. He is now working as a surveyor for the United States Reclamation Service at Babb, Mont., and says he likes it very well indeed.

Walter Whitehead has left the sacred confines of the Institute and gone to the really wild West, where, judging from the following paragraph, he is roughing it in the genuine style. He is with the United States Geological Survey located in Utah and says:

The first part of the summer I spent on laboratory studies of the ore deposits at Tintic, Utah, and later, while enjoying a vacation in Maine, I was assigned to work here in southern Utah. The job is very interesting and quite pleasant, except for occasional dust storms on the desert. Now I am at Green River examining some of the radium mines to the south and next week will start south for two months' work in the saddle, with a pack train to carry grub and water, to look over prospects in the desert between here and the Colorado River. It's a great country, but oh, so quiet compared to Tremont and Boylston streets.

We hope next issue to do more justice to the fame of our architects but news this time is certainly scarce.—“Heine” Glidden and Bowman are still in Boston and may be seen disporting themselves at tennis on Jarvis Field occasionally.—William S. Gilmore, who used to be with the class, returned home to Florence, Italy, where he is now in the real estate business.—F. H. Kennedy, who spent three years with us, was graduated this June and won the Rotch prize for the highest standing in the regular course of architecture. This year he is assistant in descriptive geometry.

Our chemists have shown their ability outside of the matrimonial column. Note the ease and finished style of this letter from Pastene, X:

Another cry from the wilderness! I saw in the July REVIEW that my Kansas City address was listed, but, alas! the REVIEW must be faster than that, Oh very much! For I was then in Memphis—without warning to you, I'll admit—and now here I am in East St. Louis. Moving frequently has two objections, namely (1) inability of mail to keep up with one, and (2) incidental expense. But the exigencies of the battle of life, insignificant now compared to the strife of the races abroad, have required my moving. Will you please give me my new location in the next list as follows: care of East St. Louis Cotton Oil Company, National Stock Yards, Ill.

This is a short way out of East St. Louis.

I have not been here long enough to seek my fellows in exile from M. I. T. but I hope soon to do that.

—The Harvard spirit has attracted Tenney L. Davis, V, who is a student in the graduate school there.—Lester Hoyt, also V, has gone to take charge of the food-laboratory of the Larkin Company at Buffalo, where he seems to have a very favorable opening “There's a reason” why we should look into the excellence of Larkin foods.—John Livingston, commonly known as “Livie,” has been at home in Alto, Mich., this summer. He writes as follows:

I've got so far away from chemistry and engineering that those subjects are merely words to me now. My steady job out here is that of Potato King. I've six or

seven acres of first class, no. 1, Ne plus ultra spuds, which I planted—even ploughed one half the ground, after I reached home from Tech. I'm now continually engaged in problems such as these, "If the potatoes go x bushels per acre and I get y cents per bushel, how many symphony seats can I buy with the profit, or how much money would I have after paying the National debt?" It's a most thrilling pastime!

We shall certainly be glad to hear the answer, Livie, and hope it's a high order of magnitude.—George Richter, the pride of Course X, sailed down to Boston for the world's series games and is the very picture of prosperity. Living in the White Mountains (Berlin, N. H.) certainly agrees with him; and he likes his work with the Burgess Company, so why shouldn't he smile? A letter written earlier in the season contained the following:

Arthur, old top, research is one sport which is continuous the year round. I am still endeavoring to replace John D.'s rather exclusive auto-juice with a cheaper, more suitable, etc., fuel in the form of grain alcohol from our waste wood. Also I'm prying into other industrial mysteries just as fascinating. Yes, I read with humid eyes the daily announcements of young men of '13 journeying from bachelordom to husbandry. Gee!

Why do they seek yon dim seen shores,
Where cares begin and end no more,
In seeming joy?

You might infer that I have not yet joined the benedicts. I wonder when?

We wonder, too, George, but bet you won't be able to hold out long. You can't fool us that way.—George Wallace, Jr., is with the Fitchburg Paper Company.

A number of Course VI men have given indications of animation.—Dick Cross is with the Aluminum Company of America, at New Kensington, Pa. Note carefully his tribute to the secretary's promptness as a correspondent:

Your letter of a few days ago received, and I was very glad to hear from you so soon; in fact, it quite surprised me, for no other Tech man of my acquaintance ever replies until the news is old enough to be outlawed. I wish Macdonald and Nichols might see this. There is not much to write regarding my work, at present, anyway: I am going through the mill, for to answer your question specifically, I don't know very much about aluminum. However, after a year or so of this, I hope to be able to fool somebody into believing that I do. This is an awful town, and life is only made endurable by the fact that there are several others here, and Pittsburgh is only a few miles away. I am sending this to the University Club as your address, though I wonder if you really live there, or just sneak in to write letters.

Aren't you the Sherlock Holmes, Richard? The secretary was getting away with that address till then.—Alfred L. Higgins, VI, is living at home and is in the sales department of the Fisk Rubber Company.—William Wallis has entered the Carnegie Institution at Washington, D. C., as magician.—The following bit from Thomas, headed Webster Groves, Mo., contains what is now some ancient history, but hasn't appeared in print before:

Have been employed as assistant engineer since July 18, 1913, with the Electric Company of Missouri furnishing light and power to St. Louis County, and Franklin Company, Mo. It owns the substation that receives all the power from Keokuk. I am also making an electrolysis survey for the St. Louis County Gas Company, a company closely affiliated to the Electric Company. This is very interesting.

On February 20, 1914, Larry Hart, Harry Peck, Ed. Downey, VI, Joseph Desloges VI, '12, and myself, VI, had a dinner party at "Fausts." Afterwards, all of us except Hart, who being the only married man of the crowd, had to go home, adjourned to one of the motion picture theaters, and saw Jack Barrymore in "The American Citizen," a film that the four of us agreed was perhaps the finest we had ever seen. T. A. O'Reilly, I, is also in the engineering department of the Electric Company. Our boss, the engineer, is a Wisconsin U. man and also an old student of D. C. Jackson.

Larry Hart has given up his place with the Bemis Company for a more favorable opportunity. The following little treatise by him will be of interest:

The science of acoustics was first studied with success by Prof. Wallace C. Sabine of Harvard University, who began his experiments and research work in 1895. After fifteen years of this work, at the suggestion of several leading firms of New York architects, the correction of architectural acoustics was placed upon a practical basis by H. W. Johns-Manville Company of New York City with Prof. Sabine as consulting expert. Mr. C. M. Swan of the class of '99, and formerly of the physics department at the Institute, has charge of the engineering work and is also general manager of the department. After working under him in New York, I have had the honor to be made his assistant in the middle west, my territory extending from Winnipeg to New Orleans.

Regarding the causes which necessitate the correction of church, theatre, and auditorium acoustics, I have not space to say much. A great many auditoriums are bad, acoustically, because of the condition brought about by what we call reverberation which is due to a multiple reflection of sound waves from the hard interior surfaces of such halls. The production of definite sound images or echoes is also one of the difficulties sometimes experienced in an auditorium, as well as troubles arising from resonance and various interference phenomena. Our department corrects these faults by means of a treatment so designed and placed as to absorb the sound energy at such surfaces of reflection as will correct the above faults and conduce to the best conditions of hearing. While it is true that the science of acoustical correction is practically new, nevertheless, all problems are attacked and solved by theoretical as well as practical calculations, like all other scientific problems. The matter of guess work never enters into our procedure.

Perhaps Larry could do something to the walls of Charlie Cross' lecture room which would prevent the echo of cat calls, when "Charlie" rubs the glass rod with cat skin.

A class with such widespread interests as ours naturally is involved in some way with the great war in Europe, and we have been fortunate enough to get two letters from the other side of the water. The first one, by W. S. Crost, VI, appeared in the *Boston American* of September 6. Crost went abroad to enlist in the engineering corps of the army of Holland, but did not enlist here or take a passport fearing that Holland might be involved in the war before his arrival. The omission, however, was an unfortunate one as his subsequent experience showed. On the trip across, the ship was hailed several times by warships but reached Holland safely. He says:

Arrived at Rotterdam about 7 a. m. Thursday. I had no passport, so I was detained by the police and taken to the Harbor Police Station. This country is under partial martial law. Many thousands out of work in Rotterdam. Fishing fleets tied up. No work for longshoremen. Many families in want.

I was kept at Harbor Police Station until 3 p. m. Taken to police headquarters.

Walked through Rotterdam with two policemen. Examined there and they took away my money, letters and baggage. Held until 10 o'clock p. m. Had nothing to eat all day and got a fierce headache. They wanted to send me to England. I wouldn't go. They wouldn't let me communicate with the United States Consul. Finally they gave me \$5 of my money and kept everything else. Policeman took me to a hotel, told me to report at 10 a. m. Friday, August 21, at headquarters. Got up this morning, went to United States Consul. Nice man. Very indignant. Said they had no right to hold me and treat me that way if I was American citizen. United States Consul, Mr. J. Lisdoe. Consul told me if I have any more trouble to tell the chief of police that I demand to be sent to him with a policeman.

I am now at police headquarters waiting to see the chief.

Apparently there are no regrets on Crost's part, for the letter closes as follows:

I will still endeavor to get a passport or send to the United States for one. If not, I'll simply go back to Boston. Anyway, we had a dandy trip over, and I wasn't sick. The weather was great and I enjoyed the sail.

Most of us would consider it quite an adventure.—The service of the class is so excellent that we can even claim a special representative in Berlin, which is better than many more widely known organizations can do. Charles Burdick, III, went abroad this summer to study and arrived in Germany just before the war broke out. In a letter recently received Burdick tells about his first few weeks in the country.

He arrived in Hamburg the first day of mobilization; and, finding things much disturbed, decided to go first to Wernigerode, a quiet town in the Harz Mountains, there to wait until conditions quieted down somewhat. It took him three days to make the trip, which usually occupies only three hours, and in description of the town he said:

Wernigerode is a very picturesque and pretty little place, but it was there I met my Waterloo! Talk about religion. It is Wernigerode's only recreation. During my fifteen days' stay I went to church four times, endured fifteen morning prayers, heard grace asked one hundred fifty times (before and after each meal, and, of course, five meals a day) and went three evenings to the graveyard. The town is full of smells; so in spite of the fact that Germany was still rather unsettled, I packed up my traps and came to Berlin.

Burdick found little activity at the universities, of course; but Prof. Haber, under whom he hopes to work, thought his own laboratory might be open by Christmas. (That was the last part of August.) In the meantime, Burdick has begun a study on the identification of dyestuffs in flowers under Prof. Wilstatter. Although the food caused some difficulty at first, Burdick describes his living conditions as very pleasant, and his outlook is quite optimistic. We shall hope for more despatches from him.

The following letter from L. H. Lehmaier, III, was received in an official-looking envelope, marked "Australian Expeditionary Force," just before the last copy went to press; and we run the risk of violating neutrality laws by printing it. However, it gives such a realistic touch to our "War Department" that it's worth the risk, so here goes:

If this letter ever reaches you, there will be about as much surprise on my part as on yours. Mainly because I was floating around the Pacific Ocean on a troop ship with about 1,999 other souls trying to evade heavily armed German cruisers, floating mines and other marine vertebrates absolutely unknown to Professor Shimer and his merry band of fossil diggers. Truth to tell the war dislocated the output direction of my late corporation's commodities to such an extent that it was forced to dispense with the charming "physiogs" of certain of the most intellectual of its staff. My face being high up in the Natural Life list, they dispensed with it amongst the first and cast me out in a seething ocean of unemployed. Just about the time of my eventful drop from a haven of hard work in a H—of laziness, they launched this good troop ship with the ultimate idea of annexing all the German possessions in the Pacific, and flying the British flag over them. Like a shot I applied for a position and was lucky enough to get attached to the headquarters staff, as the colonel's guard. We sailed three weeks ago on Tuesday next but I am unable to tell what we have done up to the present as it is kept strictly under the hat. The game is very exciting because we are in imminent risk of being sunk, either by the armed German cruisers in the vicinity or by floating mines. We have a small fleet convoying us at present; here again I am prevented telling you either its armament or constitution. The point being that this letter might fall into the hands of our opponents, then there would be the devil to pay. If all goes well we should finish the job in December. Then if the war isn't finished we may go back to Sydney, coal and then leave for duty in Belgium. In the latter event, it will give an opportunity for coming to Boston (granted the war is finished next year) and seeing the New Technology. The mess bugle has just sounded and that's one thing I never miss, so goodby for the present. Last night two of us sat on the boat deck and hummed Tech tunes for two hours.

In closing, the secretaries wish to thank all of the class who have coöperated by handing in news and hope the spirit will keep up. The next thing to bear in mind is the class dinner which every fellow should make an effort to attend.

Address Changes

John K. Batchelder, Trail, B. C., Can.—R. D. Bonney, 5 Concord Ave., Belmont, Mass.—Allen F. Brewer, care of New Jersey Board Public Utility Commission, Newark, N. J.—Ellis W. Brewster, Technology Chambers, Boston.—H. G. Bruner, 12 Grove St., Arlington, Mass.—Charles L. Burdick, P. A. Herrn W. Bergmann, Droyesen Str. 7, Charlottenburg, Berlin, Germany.—Arthur W. Carpenter, Municipal Filtration Works, Alliance, Ohio.—Richard B. Cross, 415 Fifth Ave., Parnassus, Pa.—Albion Davis, care of Mississippi River Power Company, Keokuk, Iowa.—Stanley H. Davis, 370 Franklin Ave., Hartford, Conn.—Henry W. Dew, Jr., United States Reclamation Service, Babb, Mont.—Harold H. Griffin, United States Coast and Geodetic Survey, Washington, D. C.—Laurence C. Hart, care of H. W. Johns-Manville Company, 322 N. Michigan Ave., Chicago, Ill.—Edward Hurst, Erie Y. M. C. A., Erie, Pa.—Edward E. Jewett, 519 Putnam Ave., Brooklyn, N. Y.—Miles E. Langley, 24 College St., Brunswick, Me.—Horace M. Lawrence, Voigts Camp via Princeton, B. C., Can.—Peter C. Lieber, Box 106, Indianapolis, Ind.—A. J. Pastene, 615 Veronica St., East St. Louis, Ill.—George Richter, 250 Church St., Berlin, N. H.—Nimr S. Saleeby, Manila, P. I.—David Stern, 25 Angell St., Dorchester, Mass.—Edward

E. Smith, 2d, University Club, Madison, Wis.—Robert W. Weeks, Gibbs & Hill, Penna Sta., New York, N. Y.—Walter L. Whitehead, Granite via Hanksville, Utah.—Roland M. Wilson, 1117 Board of Trade Building, Portland, Ore.

1914.

CHARLES PARKER FISKE, *Sec.*, 99 Aspen Avenue, Auburndale, Mass.

ELMER E. DAWSON, JR., *Asst. Sec.*, 1900 Nebraska Avenue, St. Louis, Mo.

Yes, Mr. Fourteener, this paragraph is meant for you particularly. First, have you sent the secretary any news of your whereabouts? Probably not, unless you are one out of fifty. And seriously, don't you consider it possible that today, not tomorrow or the next day, you can beg, borrow, or steal a postal or a stamp and when the boss isn't looking write your name and address, if you haven't time for anything else, and send it along? We should like very much to keep the class directory absolutely up to date and the only way of accomplishing this difficult task is for each man to enlist himself to the extent of advising us every time he moves. The opportunity is now ours, yours, to start this thing right, before we are separated in all corners of the globe, and your whereabouts a secret with you. So come on, classmates, a "line a month" to the secretary and we will have the best class news and directory possible. How about it, men, are you with us?

Now for the matrimonial news: Leigh S. Hall, II, was married on September 30 to Miss Marjorie C. Leavitt of Concord, N. H. Leigh is already well started in the auto business with his brother. They own a garage in Concord and also the Suburban Transit Company of which Leigh is president. After a wedding trip he will live in Concord.—Samuel Breck, Jr., XI, is engaged to Miss Margaret Dow, daughter of Mr. and Mrs. Charles H. Dow of 17 Winchester street, Brookline.—The engagement has been announced of Miss Genevieve G. Milliken of Melrose Highlands and Benjamin C. Cromwell, Jr., III.—"Boggs" Morrison, II, at last admits that he has pledged himself to join the benedicts. Mr. and Mrs. Edward N. Pearson recently announced the engagement of their daughter, Miss Mildred Pearson, to "Boggs." Mr. Pearson is Secretary of State in New Hampshire and lives in Concord. "Boggs" has been working for his father most of the summer but is now on the lookout for a new position.

—Edward A. Ingham is engaged to Miss Wickware of Topeka, Kan.

—The *Boston American* of June 21 prints:

Announcement has been made of the engagement of Miss Katherine M. Fowler of Auburndale to Assistant Naval Constructor Thomas Beall Richey, U. S. N., of

Virginia. Mr. Richey is a graduate of the United States Naval Academy, class of 1909, and received a Master of Science degree from the Massachusetts Institute of Technology this year.

—The *Boston Evening Record* of June 23 prints the following:

Mr. and Mrs. C. D. Higby have announced the engagement of their daughter, Miss Janet Baker Higby, to Malcolm Lewis, VII, the son of Mr. and Mrs. A. J. Lewis of Jamaica Plain. Miss Higby since being graduated at Smith College, two years ago, has been continuing her studies at Technology, by taking a course in the chemistry of foods.

—“Bill” Price, X, is engaged to Miss Kathleen Fortin of Boston. Bill is back again for a term.—From the *Transcript*, Holyoke, Mass., dated October 3, we have the account of Earl H. Cummins’ marriage:

A very pretty home wedding took place this afternoon at 4 o’clock at the home of Mr. and Mrs. Edward L. Dickinson of Thorpe avenue, when their daughter, Miss Edna L. Dickinson, became the bride of Earl H. Cummins of Des Moines, Iowa.

The bride is a graduate of the Holyoke High School in the class of 1907, and attended Northfield Seminary. She is very well known in Holyoke and Springfield. The groom is a graduate of Drake University of Des Moines, Iowa, and has received Master of Science degree from the Massachusetts Institute of Technology. He is a member of the corporation and laboratory director of the Boston Bi-Chemical Laboratory, a prominent chemical and biological laboratory.

Following a wedding trip through the South, Mr. and Mrs. Cummins will make their home in Boston.

This is a pretty good start and there must be lots more news for this department that hasn’t been received.—“Red” Treat and W. A. Snow, II, and “Walt” Keith and R. P. Dinsmore, X, are working in the experimental department of the Goodyear Rubber Company, Akron, Ohio. Treat and Keith, who are living at the University Club, seem to be well situated. Keith sends the following:

“Red” and I have a fine room together and are getting along nicely. We are certainly lucky in the way of board, for I never had better grub in my life. There are all conveniences here at the club, including a very nice dining room where ladies may be taken.

“Red” made a flying trip to Boston recently, but was too busy to do much looking around, and so we will give you his letter:

Up every morning at five-thirty, unless we oversleep, and then work till five in the afternoon. Saturday afternoon is the one time during the week to which we look forward with pleasure. However, we are having a good time and with “Pauline,” the motor bike that Walt and I bought together, we manage to cover the surrounding country quite thoroughly.

—Roy Parsell, II, spent the summer operating sight-seeing machines for the Royal Blue Line, making trips from Boston to historical points of interest.—“Jim” Hadley, II, is with the Metropolitan Water and Sewerage, which is carrying on construction work near Boston.—Don Crowell, X, is working in his father’s chemistry laboratories.—“Pete” Storke dropped a postal a while ago and said that he was loafing then but expected to start work

about the first of September on a big electrical transmission line near Seward, N. Y.—Bird Duff, I, seems to be hard at it. He writes:

For the past month I have been working on a survey for the Lake Erie and Ohio Ship Canal and am getting some mighty good experience as assistant to the hydraulic engineer.

—Casey Wells, III, is assistant chemist for the American Smelting and Refining Company at Murray, Utah.—W. H. Leathers, II, is with the Pneumatic Scales Company at Norfolk Downs, Mass.—Phil Scannel, II, is in his father's boiler works at Lowell.—Eric Mason, III, is by this time, probably, back home in South Africa.—Lyman Baird, II, intended to start work immediately after school let out, but when he got home he decided July 6 was early enough. He is with the Wilcox Motor Company.—"Skip" Dawson, II, and "Phil" Morrill, I, are working for the Bemis Brothers Bag Company. During the summer they were located in Boston, but left just recently for St. Louis, where the concern has a branch office. "Skip" was successful in obtaining a week's leave of absence from the office to join the Boston Yacht Club on its annual cruise, which he pronounced to be a great success. He writes as follows:

It certainly was a quick get-a-way that I made from Beantown, but it was made necessary by the circumstances. Now here I am in the home of Budweiser, with Phil Morrill, learning how to make bags. I came out here for awhile and hope to be back in Boston by the first of the year. Boston has got it all over the middle west as a good place. If Phil weren't along I think I should be driven to drink, and, believe me, I wouldn't mind being back at the old 'Stute right now.

—“Percy” MacCullough, VI, left August 24 for Calcutta via England. He is to be located there some time, working for the same concern. If he hasn't been captured by some warring nation's ships he should be there now.—Dean Fales, II, is the happy possessor of a new “Fiat” and seems to take life just as seriously as he always did.—Henry R. Aldrich, III, is instructor in mining and metallurgy in the department of geology at Northwestern University.—S. T. Spitz, X, was seen this summer on the way from South to North Shore, from one good time to another. As it might appear from this, he has been taking a long vacation.—“Ted” Wyman, IV, is back again from Europe and when last seen was hard at work to finish up a plate on time. “Ted” had a good time and a splendid experience abroad, after which it must be rather tame to settle down to school again.—Ralph Salisbury, IV, is working for Guy Lowell in New York City.—John Welsh may be seen frequently around Boston on the lookout for business. He is with the American Vulcanite and Fibre Company.—“Dave” Sutherland, II, sends the following:

Instead of becoming a lumberman I find myself in the oil and grease business as mechanical engineer in active charge of construction work for the Eclipse Plants of the Atlantic Refining Company. Every Monday night they pull off a corking little dance at the park, when and where the “society”, such as it is, of Oil City and Franklin attempt to Max. and Tang. Fred Karns, II, has been very nice about having me up to his house a few times.

—H. B. Richmond, VI, is working for Stone and Webster in Boston.—“Hen” Merrill, XI, is land foreman for the T. A. Scott Wrecking Company and is living at home.—“Stan” Churchill is reported as having taken up the study of patent law at the Harvard Law School.—“Doc” Leslie, II, has been in the drafting room of the American Submarine Signal Company for about three weeks. The rest of the summer Doc took it easy.—Charles Burns, X, is reported to have gone to Paris for the summer. He will have some interesting experiences to relate if he stays there long.—L. M. Richardson, I, is with the Aberthaw Construction Company in Boston.—“Spig” Guething, II, is evidently a believer in the simple life for he is working on his farm at Hollis, N. H. He is coming back in February to finish his course.—“Bill” McPherrin seems to have a very good position. He writes:

I am working here in the Hendey Machine Company which manufactures lathes, milling machines and shapers. They employ, when running full time, about 1,000 men. At present my part of the work is rather varied, due to bad business conditions in this country and also due to the war. I spend all of the time I can in the works, in a pair of overalls, 7 a. to 6 p. Most of the time I am working as a helper or as machinist, and sometimes I simply have to stand and watch. With the shop going only four days a week, I spend Friday and Saturday in the drafting room designing a new crank shaper. The combination of drafting room and shop seems to work finely.

—A. B. DeWitt, X, spent the summer with the Pilgrim Laundry.—“Herb” Hall, “Dick” Favorite and Ernest Kerr, II, are working for the Factory Mutual, 31 Milk street, Boston. Kerr has been with them all summer, while Hall and Favorite just joined him. Hall returned from Europe September 23, his voyage home being considerably less eventful than his trip over. About August 1, when all lights were out, one German ship offered an exciting chase for the fifteen million that was on board, but was not fast enough. He says that he saw many active signs of the war, but no fighting.—Favorite went the opposite direction this summer, visiting all through the southwestern part of the country, more particularly in New Mexico, where he says one of his least pleasant experiences was riding forty miles on a mustang, the first time that he was ever astride of a beast of burden.—“Buck” Dorrance, X, is working for the Campbell Soup Company. He sends the following:

Since I last saw you I have had a long series of good times. I spent two weeks at Hawthorne Inn (East Gloucester) and rented a fifteen footer, which helped to pass the time pleasantly. “Skip” Dawson came up to see me the day of the Salem fire and we sailed almost down to it. For the past month or two I have spent twelve hours a day at the factory in an attempt to learn the business. Just now I have a distinct longing to see some members of the class, just as we used to meet at this time of year. I am looking forward to some stirring times in the next year—mostly stirring soup.

There are a great many fourteeners back as assistants. The following are some that the secretary has heard about:—A. F. Petts, II, assistant instructor in the testing materials lab.—Ross

Dickson, X, is in the industrial laboratory under Dr. Lewis.—Gordon Greenough and M. Levinson, X, are in the department of applied chemistry.—B. H. Hale, X, is assistant to Dr. Williams in the department of qualitative analysis.—R. V. Townsend and W. A. Simpson, X, are under Dr. Sherrill.—L. F. Hamilton, V, is assisting Dr. Hall.—“Jack” Morse is back on the job and is assistant to Prof. Allen.—T. F. Comber, I, and E. W. Bowler, XI, are under Prof. Spofford.—Ned Hayward, I, is assistant to Prof. Breed and W. C. Eberhart, I, assistant to Prof. Robbins.—In answer to a desperate appeal for news, “Tom” Duffield, XI, wrote the following:

It is true that I am the “Health Officer” of Summit, N. J., in complete charge of the public health of this little city of 9,000. It is a beautiful town, but the residents are quite slow to accept modern health methods. George Fuller, who wrote the book that we were compelled to purchase in studying sewage disposal, is a resident of the city, but does not take an active part in the work here.

—Charlie Fox, XI, is in the department of sanitary engineering of the State Board of Health of Maryland and is located in Baltimore.—“Pat” Gilbert is with him and they have had some very instructive and interesting experiences, especially when they went hunting for a “bee-tree.”—“Pa” Coburn, “Gene” Macdonald, Charlie (Fox) and “Pat” Gilbert, XI, dropped down to Asbury to see Duffield when the latter two were on their way to Baltimore and Charlie spent Labor Day and the Saturday and Sunday preceding with him down there. Duffield says:

It seemed fine to have him there as you can imagine. Pat was at that time at his home in Beverly, Mass., suffering from a severe attack of malaria. He has since returned and is now on the job again as near as I know.

—“Peb” Stone, I, is with the Ambursen Company in Montgomery, N. Y. Homer Calver, I, is now with him, or was when I last heard. They have been working on some small construction job. Peb was laid up for a month this summer with blood poisoning.—“Chet” Ober, Alfred Milliken and Charlie Shaw, I, are with the United States Coast and Geodetic Survey stationed at Portland, Me. They are apparently having a good time. It took Charlie quite a little while to get accustomed to the rolling motion of the boat and I am told he was sea-sick four times in the first three days. They are making a survey of Portland Harbor, on the United States Government ship *Escort*.—Z. Y. Chow sent Duffield a letter from Amherst, Mass., when he was there making arrangements for the Conference of the Chinese Students in America. We shall expect some information about his part in that work and also about Turpin Hsi, who was in the “war zone” in Europe when last heard of. Duffield also saw Kirk McFarlin on a train going to Orange. He is in the employ of the engineering firm that has charge of many improvements on a branch of the Lackawanna at present and he goes through Summit every day.—J. I. Moreno, XI, has been appointed, by the Government of Ecuador, Government Technical

Commissioner in the Sanitation works that are under construction in Guayaquil.—W. E. Lucas, II, is reported to be very much engrossed in the promotion of the stock of a new baby food, which is just being put on the market.

Address Changes

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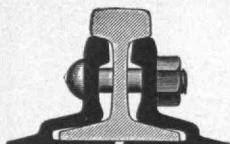
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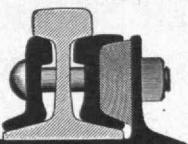
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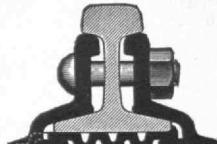
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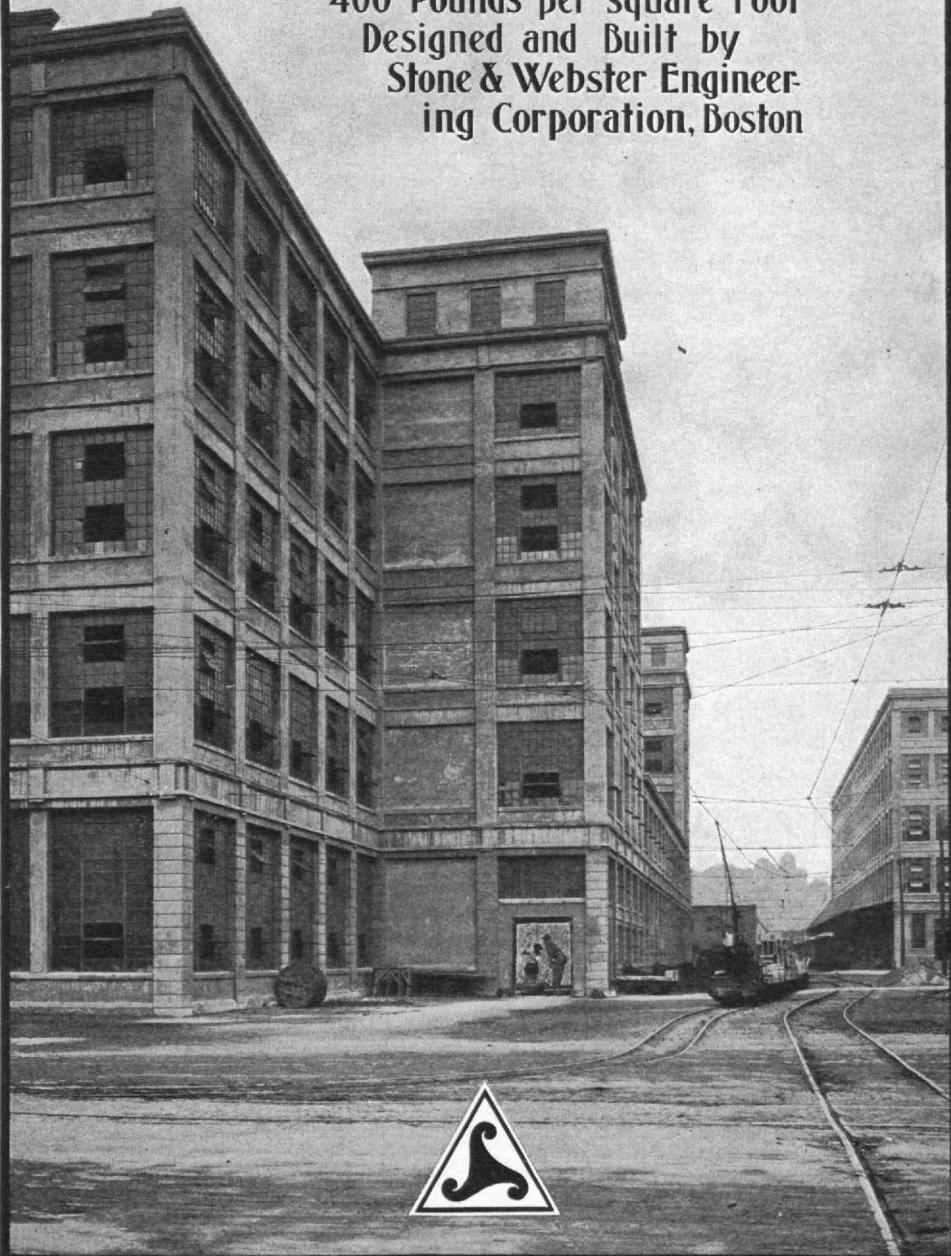
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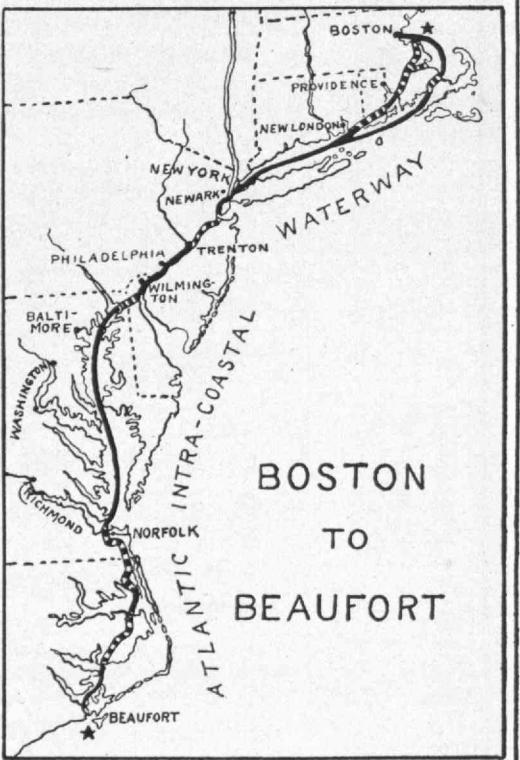
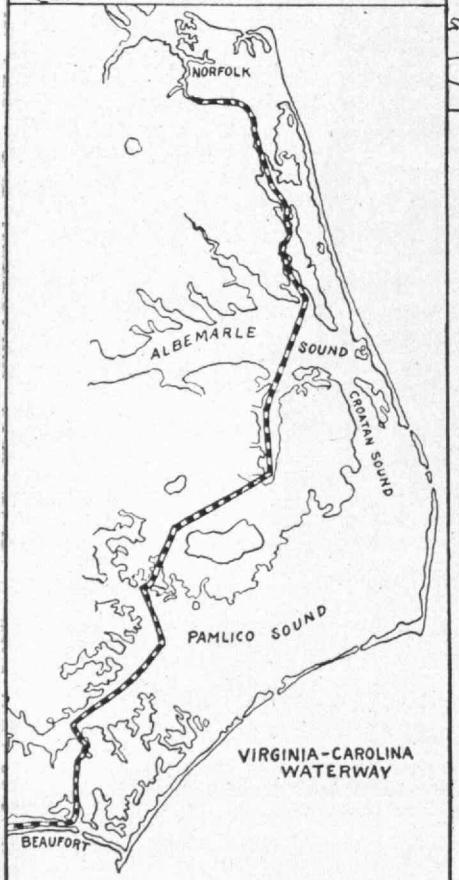
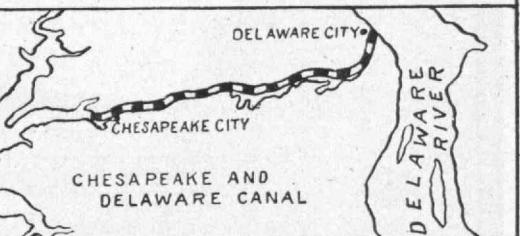
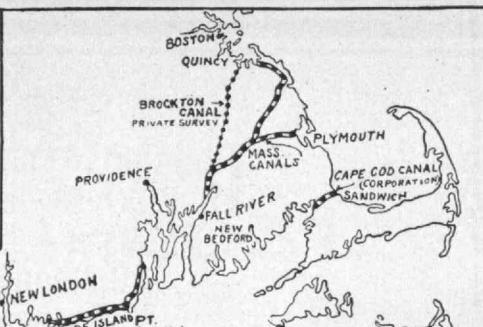
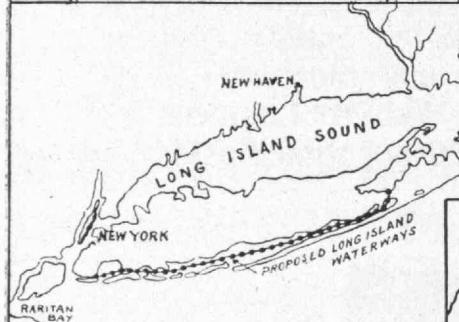
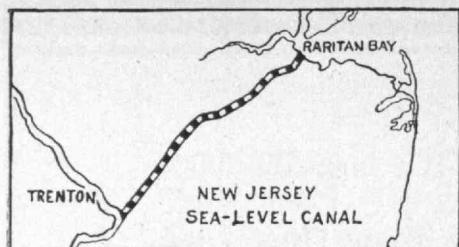
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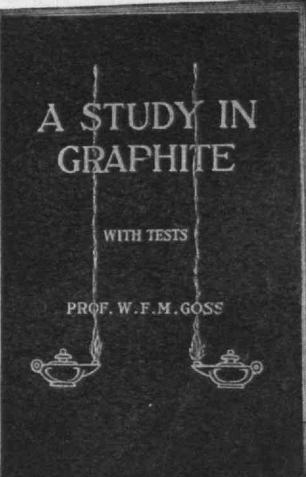
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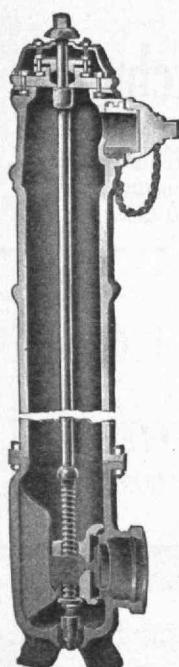
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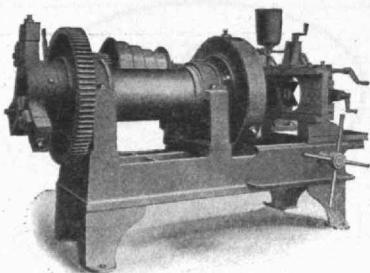
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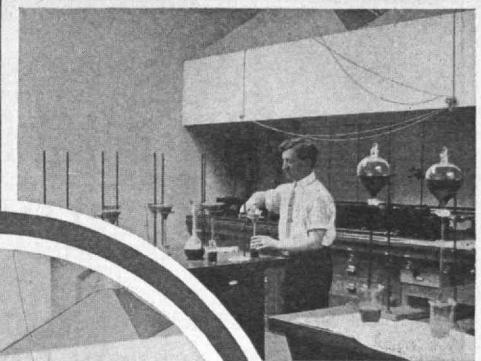
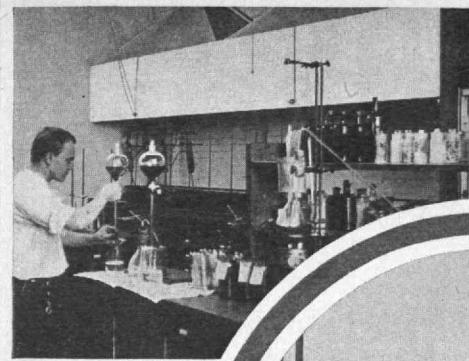
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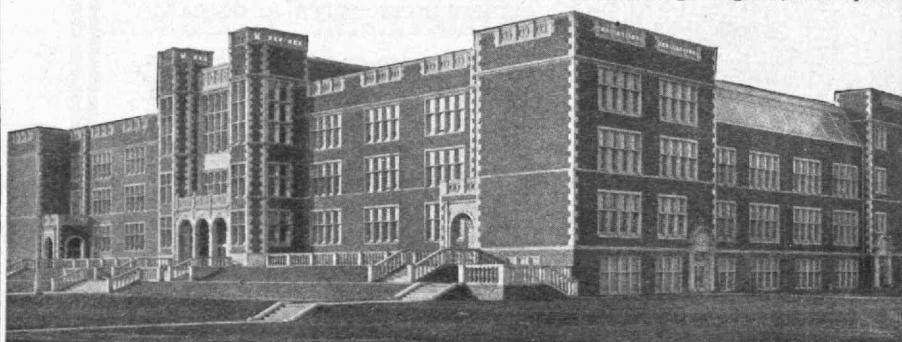
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